Endline assessment of Reading Competencies of Students in grades I - IV in Uttar Pradesh and Odisha: Results from 2018

'Start Early: Read in Time' Project
CARE India (CISSD)

Submitted by Kaarak Enterprise Development Service Private Limited

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1   Executive Summary

Start Early: Read in Time is a CARE India Solution for Sustainable Development (CISSD) project implemented in partnership with USAID, in select districts of Uttar Pradesh and Odisha with an overall goal of improving "early grade reading skills of children (6-9 years of age), especially girls from marginalized Dalit and Adivasi communities in the formal primary schools in Odisha and Uttar Pradesh."

In order to reach this goal of improving early grade reading in government schools, the project has been implementing innovate techniques in three districts in UP and one in Odisha since 2014. The project extended to two more districts in UP in 2016 and another district in Odisha in 2017. This report presents the findings of the endline study conducted in the initial four districts under the program, namely- Bahraich, Balrampur and Shravasti in UP and Mayurbhanj in Odisha.

With support from USIAD, CARE India commissioned Kaarak Enterprise Development Services Pvt. Ltd. to conduct the endline study. The purpose of the study was to:
- Assess the reading skills of students in grades I-IV
- Assess teachers' preparedness/knowledge and skills specific to early grade reading and gender equity
- Assess school and classroom practices
- Assess school management committees towards girls' education
- Compare the results to the baseline findings of 2015

The study consisted of an endline child assessment survey which entailed quantitative data collection from a representative sample of students in grades I to IV in select schools under the program, many of whom belonged to marginalized tribal communities. In all, 2127 students were surveyed, of which 1595 were in UP and 532 in Odisha. The students included 50% male and 50% female students from predominantly marginalized communities such as Dalits and Adivasis. In UP, 7% of the respondents were from general caste category, 32% from SC, 1% from ST, 18% from minority and 42% from OBC. In Odisha, 1% of the respondents were from general caste, 6% from SC, 77% from ST and 15% from OBC. The method for data collection used for the child level endline survey was a grade-specific Child Assessment Tool that was based on the EGRA toolkit. This tool after few modifications has since been used in the project for all annual assessments in the project since 2015.

Further, to assess the school and classroom environment, school and classroom observations were conducted at 56 schools and 85 language classes. Additionally, 107 teachers were interviewed using a self-administered tool in order to assess their understanding on EGR and gender sensitivity. A similar self-administered tool was used to understand the knowledge and skills of the 14 CRCCs and 8 BRPs in the project area of the select districts.

Key findings:

In order to assess a child's overall progress in reading ability, the research framework covered five competencies associated to one's reading skills, namely- phonemic awareness, phonic awareness, comprehension (listening and reading), reading fluency and independent writing. These competencies are explained in detail in Chapter III and findings in each of the competencies are covered in Chapter IV. Following are some of the key findings from the endline study.

Reading comprehension

There has been an increase in the students competent in reading comprehension in both states. The following table represents the changes in students reading with comprehension competency as per grade in comparison to the baseline.

Percentage of students competent in reading with comprehension						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	8	2	44	9	26	5
Grade II	25	9	41	23	33	16
Grade III	40	15	64	41	52	28
Grade IV	59	27	50	45	54	36
Average of all grades	33	13	50	30	41	21

Table 1: Grade-wise comparative table for reading comprehension (in %)

- The percentage of students reading with comprehension has increased from 21% in the baseline to 41% in the endline in 2018. The increase is of nearly 20 percentage points, which is evident in both states.
- In UP, 33% of the students were found to be competent in reading comprehension in the endline, marking an overall increase of 20 percentage points since the baseline percentage of 13%. There is also a pattern where the competency increases with progress in grades, the highest being in grade IV where 59% of the students were competent in 2018, in comparison to 27% in the baseline.
- In Odisha too, a greater percentage of students were competent in reading with comprehension, the percentage increased from 30% in the baseline to 50% in the endline. Further, unlike UP, the grade-wise trend observed in Odisha is inconsistent. Grade I and II have a similar level of competency (44% and 41% respectively). There is a rise of competency in grade III (64%), which comes down to 50% in grade IV.

The following table provides a gender based analysis of students reading with comprehension.

Gender-cut of students competent in reading with comprehension												
	Uttar Pradesh (% of children)				Odisha (% of children)				Overall (% of children)			
	Endline		Baseline		Endline		Baseline		Endline		Baseline	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Grade I	9	8	3	2	47	41	7	11	28	24	5	7
Grade II	29	21	11	6	42	39	21	22	35	30	16	14
Grade III	37	43	19	11	61	67	35	41	49	55	27	26
Grade IV	62	57	29	24	42	60	43	45	52	58	36	34
Average of all grades	34	32	15	11	48	52	26	30	41	42	21	20

Table 2: Gender-wise comparative table for reading comprehension as per grade (in %)

- Overall, there is no significant difference noted in the reading comprehension competency between genders. 41% of the male and 42% of the female students were competent in reading with comprehension in the endline. This is similar to the baseline, where too, there was no significant gender gap between boys and girls.
- Similar to the baseline, the competency between genders is largely similar with a marginal variation in the both states. While in UP, the performance of boys is marginally better than the girls in the endline (2 percentage points) as in the baseline. In Odisha, the performance of girls is

marginally better in the endline & baseline than boys (by 4 percentage points). It is also important to note that the performance of boys and girls varies across grades.

Reading

While there is a significant change in the percentage of students reading with comprehension, the percentage of students who were able to read the excerpt has not seen a major change across the years. The table below presents the percentage of students being able to read the text (grade appropriate story), since the baseline:

Percentage of students able to read the passage						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	8	8	26	27	17	18
Grade II	26	16	46	52	36	34
Grade III	41	29	68	75	55	52
Grade IV	57	43	77	87	67	65
Average of all grades	33	24	54	60	44	42

Table 3:Grade-wise comparative table for reading (in %)

- Overall, 44% of the students were found to be competent in reading. This percentage only increased by 2 percentage points since 2015.
- In UP, the percentage of students able to read the passage increased from 24% in the baseline to 33% in endline, making an increase of 9 percentage points.
- In Odisha, 54% students were able to read the text in 2018, which is 6 percentage points lower than the baseline.

The table below provides the gender wise analysis of students who were able to read the passage.

Gender-cut of students able to read the passage						
	Uttar Pradesh (% of children)		Odisha (% of children)		Overall (% of children)	
	Male	Female	Male	Female	Male	Female
Grade I	7	9	27	24	17	16
Grade II	30	22	46	45	38	34
Grade III	39	43	64	73	51	58
Grade IV	60	53	76	80	68	67
Average of all grades	34	32	53	56	44	44

Table 4: Gender-wise comparative table for reading as per grade (in %)

- Overall, 44% of both boys and girls were able to read the passage. However, there is variation in percentages between genders as per state and grade.
- In UP, boys are more competent in reading in grade II and IV, whereas girls are more competent in grade III.
- In Odisha, the results for boys and girls able to read the passage is similar in grade I, II and IV, a higher percentage of girls were able to read passages in grade III.

Reading fluency

Reading fluency is calculated based on the reading speed of a student. Students being able to read at a speed equal to or greater than 40 words per minute were scored as having the ability to read fluently.

Reading fluency is determined by students who are able to read at a speed equal to or greater than 40 words per minute. The table below presents the changes in students' ability of reading fluently as per grade, since the baseline:

Percentage of students reading fluently						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	2	0	7	4	5	2
Grade II	12	4	17	17	15	11
Grade III	26	12	37	44	32	28
Grade IV	38	17	59	68	49	43
Average of all grades	20	8	30	33	25	21

Table 5:Grade-wise comparative table for reading fluency (in %)

- Overall, 25% students were able to read fluently i.e. they could read at least 40 words per minute. The competency has increased by 4 percentage points since the baseline study.
- In the state of UP, 20% students were competent in reading fluency in 2018, up from 8% in 2015. With an exception of grade I, there is a small improvement in students reading fluently, in each grade. The increase is of 8 percentage points in grade II, 14 points in grade III and 21 percentage points in grade IV, since 2015. Further, the competency improves in each higher grade, percentage of students reading 40 or more words per minute is quite low in grade I (2%), followed by 12%, 26% and 38% students in grades II, III and IV.
- In Odisha, 30% of the students were able to read fluently in 2018. This is lower than the percentage of students reading fluently in the baseline (33%). This decline from the baseline level of competency is evident in grades III and IV. The level of grade I and II is stagnant from the baseline.

The table below provides the gender wise analysis of students who were able to read the passage with fluency.

Gender-cut of students competent in reading with fluency												
	Uttar Pradesh (% of children)				Odisha (% of children)				Overall (% of children)			
	Endline		Baseline		Endline		Baseline		Endline		Baseline	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Grade I	1	2	1	1	8	6	2	6	5	4	2	4
Grade II	15	8	6	2	15	20	17	18	15	14	12	10
Grade III	22	30	13	10	27	47	37	53	25	39	25	32
Grade IV	44	33	22	14	60	58	71	64	52	46	47	39
Average of all grades	**21**	**18**	**11**	**7**	**28**	**33**	**32**	**35**	**24**	**26**	**21**	**21**

Table 6: Gender-wise comparative table for reading fluency as per grade (in %)

- There is no clear trend seen in the performance of boys and girls in the two states.
- Looking at the average scores, one can observe that the performance of boys is marginally better than girls in UP, whereas girls have a marginally better performance than boys in the state of Odisha. This trend is similar to that of the baseline.

- Grade-wise analysis shows, there is fluctuation in the trend in UP, where boys out-perform girls in grades II and IV, wheras girls have exhibited a better performance in grade III. In case of Odisha, girls consistently perform better than boys in all grades except grade I.

Reading fluently with comprehension

Reading fluently with comprehension refers to students who are able to read at a speed equal to or greater than 40 words per minute and also correctly answer a minimum of two out of five questions based on a passage read by them. The table below presents the changes in students' ability of reading fluently with comprehension in each grade, since the baseline:

Percentage of students competent in reading fluently with comprehension						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	1	0	7	2	4	1
Grade II	12	4	17	13	15	9
Grade III	25	11	35	34	30	23
Grade IV	37	17	41	53	39	35
Average of all grades	19	8	25	25	22	17

Table 7:Grade-wise comparative table for reading fluently with comprehension (in %)

The percentage of students competent in reading fluently with comprehension has increased marginally, from 17% in the baseline to 22% in the endline. This is due to the slow reading speed of students in both states. The average reading speed of students in the endline is 45 wpm, where only 25% of the students were able to read at a speed greater than 40 wpm. Hence, a greater percentage of students are competent in reading with comprehension, a smaller percentage are competent in reading fluently with comprehension.

The table below provides the gender wise analysis of students who were able to read fluently with comprehension.

Gender-cut of students competent in reading fluently with comprehension												
	Uttar Pradesh (% of children)				Odisha (% of children)				Overall (% of children)			
	Endline		Baseline		Endline		Baseline		Endline		Baseline	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Grade I	1	2	1	1	8	6	2	2	5	4	2	2
Grade II	15	8	6	2	15	20	12	15	15	14	9	9
Grade III	21	29	12	10	25	46	30	39	23	38	21	25
Grade IV	42	33	21	13	36	49	55	49	39	41	38	31
Average of all grades	20	18	10	7	21	30	25	26	20	24	17	16

Table 8: Gender-wise comparative table for reading fluently with comprehension as per grade (in %)

- Similar to the gender analysis of reading fluency, there is a slight variation in the gendered results of the two states.
- In UP, the performance of boys is better in grades II and IV, while the performance of girls is better in grade III.
- While in case of Odisha, the performance of girls is consistently better than boys across grades II, III and IV.

Snapshot of reading indicators for grade II

The following table represents the comparative results for reading comprehension and fluency for grade II:

	Uttar Pradesh		Odisha		Average two states	
	2018	**2015**	**2018**	**2015**	**2018**	**2015**
Students who read the excerpt (%)	26	16	46	52	36	34
Reading comprehension (%)	25	9	41	23	33	16
Reading fluency (%)	12	4	17	17	15	11
Reading fluently with comprehension (%)	12	4	17	13	15	8

Table 9: Comparative table for reading fluency and comprehension for Grade II

- Overall, 36% of the students read the excerpt in 2018, wherein 33% were able to read with comprehension and 15% of the students read fluently, i.e. at a reading speed equal to or greater than 40 words per minute.
- In UP, the percentage of grade II students who read the passage increased from 16% in 2015 to 26% in 2018 (i.e. 10 percentage points). Nearly, all the students who read the passage, were able to read with comprehension. This percentage increased from 9% in 2015 to 25% in the endline, making an increase of 16 percentage points. Further, though the percentage of students reading fluently with comprehension increased from 4% to 12% in this period, it remains quite low in UP. The primary reason behind this is the low percentage of students being able to read fluently, i.e. at a speed equal to or greater than 40 wpm. Hence, the percentage of students reading fluently with comprehension is the same as the percentage of students reading fluently.
- In Odisha, a lower percentage of students read the passage in the endline in comparison to the baseline. However, the percentage of students reading with comprehension increased from 23% to 41% in this period (18 percentage points). Further, similar to UP, the percentage of students reading fluently with comprehension is the same as the percentage of students reading fluently, i.e 17%.

Overall competency

Individual scores were calculated for each of the students covered in the study and subsequently an average score was calculated for each grade. A comparative overview of average grade-wise reading scores in the endline and baseline is presented in the table below.

Grade Level	Year	UP (Average score in %)	ODISHA (Average score in %)	OVERALL* (Average score in %)
Grade 1	**2018**	**49**	**67**	**58**
	2015	18	37	28
Grade II	**2018**	**50**	**62**	**56**
	2015	25	42	34
Grade III	**2018**	**56**	**71**	**64**
	2015	29	60	45
Grade IV	**2018**	**66**	**72**	**69**
	2015	35	63	49
Total	**2018**	**55**	**68**	**62**

	2015	27	51	39

*(average of two states)
Table 10: Overall competency scores

- The endline study shows a significant increase in the grade-wise reading scores from the baseline. Overall, the reading score for grade I increased 30 percentage points since 2015, from 28% to 58%; grade II increased 22 percentage points from 34% to 56%; grade III increased from 45% to 64% (19 percentage points); and grade IV from 49% to 69% (20 percentage points).
- The scores have improved significantly in UP - the increase from baseline to endline in grades I to IV is of 31, 25, 27 and 31 percentage points respectively.
- In Odisha, the improvement reduces with progress in the grades. There has been an increase of 30, 20 percentage points in grades I and II respectively, and by 11 and 9 percentage points in grades III and IV.

Reading Context: caste and gender analysis of home environment

The table below shows the gender cut of the findings on home environment during the endline survey.

	UP		Odisha	
	Male	Female	Male	Female
Students carrying essential material for reading	93	94	93	92
Access to reading material at home other than school books	52	54	73	77
Students told stories at home	49	52	81	79
Students receiving support in studies at home	67	69	96	97
Students having ideal home environment for reading	27	28	55	59

Table 11: Gender analysis of home environment

- An analysis of the reading context of students and their home environment reveals that there is no difference in the reading context or home environment of students based on gender in either of the two states.
- Similar percentage of students carry essential material for reading in their school bags. There is no significant difference between the percentage of boys and girls having access to reading material at home, receive support in studies and are told stories at home.

A similar analysis is done on the basis of caste and presented in the table below.

	Uttar Pradesh				Odisha		
	General	SC	Minority	OBC	SC	ST	OBC
Students carrying essential material for reading	96	95	92	93	97	92	91
What is in your home to read except your school books	70	50	49	54	79	73	83
Students told stories at home	70	55	43	48	76	81	74
Students receiving support in studies at home	85	69	63	66	97	96	98
Students having ideal home environment for reading	47	29	22	26	58	56	61

Table 12: Caste analysis of home environment

- Here, it is important to compare the results of dominant castes in each of the two states.
- In UP, unlike gender, a difference is evident in the findings of General, SC, Minority and OBC categories. A higher percentage of students from the General caste category reported having reading material other than school books available at home, having someone recite stories to them at home and receiving support in studies at home.
- 47% of the general caste students qualified as having an ideal home environment for reading. This is significantly higher than other caste groups wherein only 29% of the SC, 22% of the minority and 26% of the OBC students did so.
- In case of Odisha, however, there was caste based distinction evident as in the case of UP. While the number of students from general caste covered in the survey was very low, hence, only comparison between SC, ST and OBC is studied for this state.

School and Classroom Environment

In the period since the baseline, there have been multiple changes that are evident in the school and classroom environment. Some of the key changes observed are mentioned below.

Time tables: A significantly higher percentage of schools were found to be maintaining time tables at the time of endline in comparison to baseline. In UP, the percentage increased from 33% in 2015 to 67% in 2018. In Odisha, it increased from 50% in 2015 to 71% in 2018.

Seating arrangement: The percentage of teachers who ensure seating arrangement of students is comfortable increased from 67% in the baseline to 80% in 2018 in UP. In Odisha, the percentage has increased from 57% to 90% in this period.

Library: 79% schools covered in UP had a library in 2018, this has increased significantly since 2015, where only 45% of the schools had libraries. In Odisha the percentage for 100% in both baseline and endline.

Print rich environment: Overall, the percentage of classrooms with no display of children's work has reduced from 83% in the baseline to 35% in 2018 in both states. The table below depicts the percentage of classrooms that display the works of students which includes pictures, stories, experimental writing etc.

Percentage of classrooms with no display of children' work in the class.					
Uttar Pradesh		**Odisha**		**Average**	
Endline (N=66)	**Baseline (N=58)**	**Endline (N=19)**	**Baseline (N=14)**	**Endline (N=85)**	**Baseline (N=72)**
48	86	21	80	35	83

Table 13: Percentage of classrooms with no display of children's work

In the endline, 52% of the classrooms in UP and 79% in Odisha have a display of children's work. This increased from 14% in UP and 20% in Odisha in 2015.

Further, the program has focused on supplying print rich material to schools in both states and the use of the resources has increased substantially since the baseline. Teachers creating and using print rich material in classrooms increased from 2% in UP in the baseline to 53%, and the from 29% in Odisha in 2015 to 42% in 2018.

Use of TLMs and other resources: In UP, teachers have exhibited an increased use of variety of resources for teaching other than blackboards and textbooks, the percentage increased from 26% in baseline to 88% in endline. The status in Odisha is similar to the baseline.

There is an increase in use of library books in both states.   From 14% in the baseline in UP to 67% in the endline. In Odisha, however, there is a fall in this percentage from 50% in baseline to 32% in endline.

2   Introduction

2.1   About the project

Start Early: Read in Time is a CARE India Solution for Sustainable Development (CISSD) initiative, implemented in partnership with USAID towards strengthening education systems in Uttar Pradesh and Odisha. The project is a component of the Girls Education Program, that focuses on improving early grade reading (EGR) in primary schools by addressing long standing and emerging issues that affect access, retention and achievement of students in marginalized communities (especially girls) in the two states.

The project focuses on students of grades I-IV and uses activity based learning and tests innovative techniques to improve EGR in government schools in select districts in UP and Odisha. Currently, the project is present in five districts in UP and two district in Odisha.

The key strategies used for this end are:
- **Develop school as an enabling system:** The strategy facilitates creation of a school space by creating an enabling reading environment (availability of children reading resources, creating print rich environment, ensuring use of library in classroom, development of various kinds of materials, display of children material)
- **Developing teacher as a stimulator:** Teachers are important catalyst to bring change in classroom where focus is on use of reading specific pedagogy, assessment, reading time table. The capacity and sensitivity of teachers are built in continuously through monthly reflective meetings.
- **Create enabling reading culture at community level:** Enabling environment for children at home and community level is created through building understanding of parents and promotion of reading habits.
- **Linkages and networking government functionaries:** The program learnings are shared with system counterparts at state and district level through a formal program review meeting periodically and joint ownership of learning.

The project originally started in 2014 in Balrampur, Bahraich and Shrawasti districts in UP and Mayurbhanj district in Odisha. In year 2016, the project was extended to two more districts in UP- Hardoi and Gonda and to a new district in Odisha in 2017 called Dhenkanal. This report presents the findings of the endline study of the initial 4 districts- Balrampur, Bahraich and Shrawasti in UP and Mayurbhanj in Odisha.

2.2   About the study

Purpose and objectives of the endline study

With support from USAID, CARE India commissioned Kaarak Enterprise Development Services Pvt. Ltd. to conduct the endline survey with the purpose of:

The purpose of the study was to:
- Assess the reading skills of students in grades I-IV
- Assess teachers' preparedness/knowledge and skills specific to early grade reading and gender equity
- Assess school and classroom practices
- Assess school management committees towards girls' education

The study included quantitative data collected from a representative sample of students in grades I-IV in selected districts of UP and Odisha, many of which belonged to marginalized communities including Dalit and Adivasi. The details and main findings of this study are included in this report. The research framework and finalization of study tools was carried out by CARE India, while the data collection, entry and analysis was conducted by Kaarak.

Methodology

The baseline assessment involved primary data collection and analysis using quantitative and qualitative methods. The data sources and methods of data collection are as mentioned below:

Data source	Tool	Data collection method
Students	Child assessment tool	Quantitative
School environment	School survey cum observation tool	Qualitative
Classroom environment	Classroom observation tool	Qualitative
Teachers	• Classroom observation and teacher interview tool • Self-administered tool for teachers, CRCCs and BRP	Qualitative & Quantitative
School Management Committee	SMC FGD tool	Qualitative

Table 14: Data sources, tools and data collection methods applied

The study was conducted from selected schools part of the CARE intervention. A grade-specific Child Assessment Tool was used to measure the impact of the program on the reading skills of students during the data collection. The grade specific Child Assessment Tool is based on the EGRA toolkit and was largely similar to the one used for the baseline in other districts in 2015. Detailed explanation of the research framework and tool is given in chapter 2.

Additionally, Independent tools were designed to conduct classroom and school observation. Structured questioners were designed for the teachers and teacher support institutions (Cluster Resource Centre Coordinator, CRCC; Block Resource Person, BRP). There were three clusters and one block under the prevue of the intervention which were covered for the self administered tool for CRCCs and BRP. Further, Focus Group Discussions were carried out with SMC members of the school.

Work-plan

The study was conducted between March 2018 to June 2018. The assessment was carried out as per the following work plan.

I.   **Preparatory stage**
    A. Finalizing of analysis framework and translation of tools in Odia
II.   **Data collection phase[1]**
    A. Training of field investigators and supervisors
    B. On site data collection carried out in April 2018
III. **Data analysis & report writing**
    A. Data entry and compilation of data
    B. Data analysis and draft of report
IV.   **Submission of deliverables**
    A. Preliminary finding of the baseline as well key indicator tables
    B. Table formats for all districts
    C. Final report

Sampling Design:

The strategy for sampling for the current baseline emulated the 2015 baseline sampling design done for the initial four districts in the project. The strategy has been explained below.

The sample size required to assess change depends on:
- Initial value of variable of interest (taking initial value to be 50%)
- Expected change project will make assumed to be 20% (average)
- Appropriate significance level i.e. assigning probability to conclude that an observed change is a reflection of effort and did not occur by chance i.e. at 95% level
- Appropriate power i.e. the probability to conclude study has been able to detect a specified change i.e. at 80% power.

Based on the above considerations the required sample size (n) for a variable of interest as a proportion for a given group can be given by;

$$n = \frac{D\left[Z_{1-\alpha}\sqrt{2P(1-P)} + Z_{1-\beta}\sqrt{P_1(1-P_1)+P_2(1-P_2)}\right]^2}{(P_2-P_1)^2}$$

where,
D=Design effect; (Assuming a design effect of 1.2)
P1=Initial Value of variable of interest (50%)
P2=Expected Value of variable of interest (70%)
$Z_{1-\alpha}$=the z-score corresponding to a significance level (1.96)
$Z_{1-\beta}$=the z-score corresponding to the power (0.84)

Based on the above formulae adequate sample size for a stratum using above mentioned indicator is around 111. Inflating the sample size by 20% to account for even a non-response rate, the sample size is 133 per stratum.

Following sample size of children is selected to assess reading levels from each grade in each district.

	UTTAR PRADESH				ODISHA	TOTAL SAMPLE
	BAHRAIC	BALRAMPU	SHRAVAST	UP	MAYURBHA	

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[1] A note on measures taken for quality assurance is attached in the annexure

	H	R	I	TOTAL	NJ	
GRADE 1	133	133	133	399	133	532
GRADE 2	133	133	133	399	133	532
GRADE 3	133	133	133	399	133	532
GRADE 4	133	133	133	399	133	532
TOTAL	532	532	532	1,596	532	2,128

Table 15: Sample size

The actual coverage has been elaborated upon in the following section.

2.3   Sample and demographics

The sampling technique used is the same as that used in the Baseline. The distribution of the data across grades is as follows:

	UTTAR PRADESH				ODISHA	TOTAL SAMPLE
	BAHRAICH	BALRAMPUR	SHRAVASTI	UP TOTAL	MAYURBHANJ	
GRADE 1	132	133	133	398	133	531
GRADE 2	133	133	133	399	133	532
GRADE 3	133	133	133	399	133	532
GRADE 4	133	133	133	399	133	532
TOTAL	531	532	532	1,595	532	2,127

Table 16: Data Collection Coverage

Overall, 2127 students were surveyed, of which 1595 were in UP and 532 in Odisha.

The population of the student sample covered is primarily rural population and the sample of the students is largely from the marginalized Dalit (Scheduled Caste), minority Muslims and Other Backward Classes (OBC) from the districts of Uttar Pradesh and Adivasi (Scheduled Tribe) communities of Odisha.

The social category distribution of the students covered in the survey is as follows:

	UTTAR PRADESH					Odisha				
	General	SC	ST	Minority	OBC	General	SC	ST	Minority	OBC
Class 1	6	31	3	16	44	1	8	74	1	16
Class 2	7	28	1	21	43	1	5	84		11
Class 3	9	31	1	19	41	2	7	73	1	18
Class 4	8	36	1	15	41	2	5	76	1	16
Total	7	32	1	18	42	1	6	77	1	15

Table 17: Percentage of sample from various social categories

Further, the sample covered 50% male and 50% female students. State-wise gender distribution of students is as follows:

	UP		Odisha		Total	
	Male	Female	Male	Female	Male	Female
Class 1	51	49	47	53	50	50
Class 2	48	52	50	50	49	51
Class 3	50	50	50	50	50	50
Class 4	50	50	59	41	52	48

Total	50	50	51	49	50	50

Table 18: Gender Distribution of Students Surveyed

The coverage of the other qualitative tools in the study is as follows:

District/State	School	Classroom	Teacher	CRCC	BRP	SMC
Bahraich	14	14	26	3	2	2
Balrampur	13	24	27	3	2	2
Shrawasti	15	28	28	4	2	2
UP Total	**42**	**66**	**81**	**10**	**6**	**6**
Mayurbhanj (Odisha)	14	19	26	4	2	2
Total	**56**	**85**	**107**	**14**	**8**	**8**

Table 19: Coverage of schools, classrooms, teachers and teacher supervisors

In order to assess the school and classroom environment and pedagogy, 56 school and 85 classroom observations were conducted. Further, 107 teacher, 14 CRCCs and 8 BRP self-administered questionnaires regarding teacher's knowledge on EGR and gender sensitivity were filled. Lastly, 2 FGDs in each district covering 8 FGDs and 64 SMC members were conducted

3   Research Design

The study included multiple survey instruments such as:

1. **Child Reading Assessment Study**: Individual child assessment tool based on the standard Early Grade Reading Assessment (EGRA) tool.

2. **School survey cum observation tool**: A survey cum observation tool used to understand school facilities, practices and environment at school level.

3. **Classroom observation tool**: A survey cum observation tool used to understand school facilities, practices and environment at level of classroom.

4. **Individual structured questionnaire**: A self-administered tool to assess the knowledge and perceptions of teachers, CRCCs and BRPs on language and gender.

5. **Focus group discussions**: FGD among SMC members to understand community level practices concerning reading.

The following sections elaborate on the framework for each of the tools.

3.1 Child assessment survey

This section provides an explanation of the competencies, inquiry and administrative strategy used for the endline study.

3.1.1   Reading Context of the Child

The context in which a child is growing up and, therefore, learning to read plays a crucial role in the development of reading. Access to reading material, support from family and friends, the language spoken at home are crucial factors which define the reading context of the child.

For the purpose of child level assessment, the reading context has been construed to comprise of two aspects - Home Environment and Fluency in Spoken Language. The table below explains the schema for assessing the reading context of the students:

Reading Context			
	Inquiry	**Administration Strategy**	**Competency Level**
Home Environment	What do students have in their bag?	The investigator asked each question one by one to the student and recorded the responses in the recording sheet. The responses were subsequently tabulated.	Subjective responses
	What reading material do the students have access to beyond the text books?	**Questions (respectively):**	
		1.1	
	Who narrate stories to the students at home?	1.2	
		1.3	
	Who support the students in reading at home?	1.4	

Are the students able to describe pictures using the syntax of language?	For Grade 1, the students were shown four pictures and were asked to state what they saw happening in each picture, in a full sentence. The investigator recorded the response of the student exactly. Each response was subsequently scored for completeness and for factual correctness. **Question: 2**	**High:** All those who can describe all 4 pictures in complete sentence in the list. **Medium:** Those who can describe 2 to 3 pictures in complete sentence. **Low:** Those who can describe only 1 picture in complete sentence. **Extremely low:** Those who can't describe at all or describe in incomplete sentence
Are the students able to recognise and know the words for familiar objects?	For classes 1 and 2, the students were shown pictures of 6 familiar objects and were asked to state what each object was. The investigator recorded the response of the student for each object exactly as stated by the student. **Questions: 4 (Class 1); 3 (Class 2)**	**High:** All those who can recognize 5-6 pictures in the list. **Medium:** All those who can recognize 3-4 pictures in the list. **Low:** All those who can recognize 1-2 pictures in the list **Extremely low:** Those who can't recognize any of the picture at all or recognize incorrectly
	For class 3, the students were asked to recall 10 objects from the homes. The investigator recorded each response of the student exactly as stated by the student. For class 4, the students were asked to recall 10 objects from the environment. The investigator recorded each response of the student exactly as stated by the student. The students were scored on the basis of factual correctness as well as the pronunciation. **Question: 3**	**High:** All those who can recall 8-10 objects **Medium:** All those who can recall 5-7 objects. **Low:** All those who can recall 1-4 objects. **Extremely Low:** Those who can't recall any object.

Table 20: Reading Context Assessment

3.1.2 Phonemic Awareness

A phoneme is the smallest unit of sound and phonemic awareness is the ability to hear/ identify/ distinguish and manipulate the sounds in spoken words. Phonemic awareness also includes an understanding, whether tacit or explicit, that spoken words and syllables are made up of sequences of speech sounds. This may be divided into two sub-abilities *blending*, where the child joins different phonemes (sounds) to form a coherent word, and *segmentation*, where the child is able to distinguish the

phonemes in a given word. For children, this ability develops naturally as they encounter different sounds, including those in languages spoken to and taught to them; though the realization of such ability and the need for it comes later. Experiments have demonstrated that this development can be facilitated and hastened through specific exercises and practices.

Such ability, as research has demonstrated, is an essential building block of language development, including reading, as the ability to manipulate and piece-together sounds has a direct bearing on the child's ability to identify a written word.

For the purpose of child level assessment, the sub-ability to segment phonemes was tested through a direct question and through a few indirect questions. The sub-ability to blend was also assessed through different questions. The following table explains the schema for assessing the phonemic awareness of the sampled students.

Phonemic Awareness		
Inquiry	**Administration Strategy**	**Competency Level**
- Are the students able to distinguish different phonemes in familiar words? - Are the students able to identify phonemes occurring in the beginning of a word more easily as compared to the ones occurring later? - Are the students able to identify two words starting with the same phoneme?	Students were shown four pictures which are actually two pairs of objects which start with the same phoneme. The students were first asked to identify each of the four pictures and were supported to arrive at the 'right' word in case they could not recognize the object or used an alternative word. Once the word was identified the students were asked to identify the first and last sounds in each word for class 1-3 students and last and middle sounds for class 4 students. They also asked to identify pairs of words which were starting with the same phoneme. The investigator recorded exactly the students stated responses to each of the above. Subsequently, the students were scored for the number of phonemes and pairs they were able to identify. **Questions:** **7 for class 1** **6 for classes 2-4**	*High:* Identify the first/ last/ middle sound of all (4) objects/ Identify all the pair of objects (2) beginning with the same first sound *Medium:* Identify the sound of 2-3 the objects/ Identify 1 the pair of objects beginning with the same first sound *Low-* Identify the sound of only one object *Extremely Low-* Couldn't Identify the sound of any of the objects/ Couldn't Identify any of the pair of objects beginning with the same first sound

Table 21: Phonemic Awareness Assessment

3.1.3   Phonic Awareness

Phonic awareness may be described as the ability to link phonemes with graphemes – sounds with letters of a given language. When a child can recognise and articulate the sound of a given letter of a set of letters or, conversely, when a child can identify the appropriate letter or letters for a sound, the child can be said to have acquired phonic awareness. This is a relatively complex ability as it demands both phonemic awareness as well as recognition of letters of a language. This is not an ability which a child acquires naturally, without specific effort or external intervention, unlike phonemic awareness. This ability is an important stage in the developing the abilities to read and write.

For the purpose of child level assessment, phonic awareness was assessed through two direct questions as described in the table below:

Phonic Awareness

Inquiry	Administration Strategy	Competency Levels
Are the students able to identify simple or complex letters and articulate their respective sounds?	Students were provided with a set of letters and were asked to read the same aloud one by one. The investigator marked letters correctly identified and pronounced by the student on a recording sheet. Subsequently the students were scored for the number of letter they identified correctly. The degree of difficulty was higher for higher classes. **Questions:** **5, 6 (Grade 1)** **4, 5 (Grade 2-4)**	**High:** All those who can read 50% or more letters from the list **Medium:** Those who can read 50% of the letters. **Low:** Those who can read 20 to 50% of letters in the list. **Extremely low:** Those who cannot read at all or read incorrectly all of it.
Are students able to write words dictated to them?	Every investigator read out a fixed set of six words to the students one by one. The students were supposed to write each word down in designated space on a recording sheet. The investigator gave sufficient time to the students to complete each word and moved to the next word only when the student completed the word or expressed inability to do so. The students were scored for the number of words they could write fully and correctly without any grammatical errors. **Questions:** **8 (Grade 1)** **7 (Grade 2-4)**	**High:** All those who can write correctly 6-5 words from the list of 6 words **Medium:** Those who can correctly write 3-4 words from the list of 6 words **Low:** Those who can correctly write 1-2 words from the list of 6 words

Direct

Extremely Low: Those who can write none of words correctly

3.1.4 Comprehension (Listening and Reading)

Comprehension is the ability to make meaning of any phenomenon that one encounters through any or a combination of sensory experiences. In terms of reading, it is both a component as well as the objective of reading. This is a vital ability for a reader for two reasons: 1) Being able to understand what has been read so far motivates the reader to go further and 2) Being able to understand what has been read so far primes the reader to read and make meaning of what is to follow.

For the purpose of this assessment, comprehension was assessed at two levels – comprehension through listening and comprehension through reading. The former is relatively simpler is acquired naturally while the latter demands that the student be able to identify letters, recognise words, read sentences and make meaning of the same. The table below describes the schema for assessing these two types of comprehension.

Comprehension (Listening and Reading)		
Inquiry	**Administration Strategy**	**Competency Level**
Are the students able to respond to questions based on a passage read to them?	Investigator reads a passage to the students following which the students were asked to respond in full sentences to five questions. The first two questions were factual, meaning responses were stated verbatim in the passage and the students only had to recall the line/words. The remaining 3 questions were inferential and the student had to construct a response based on information from the story as well as their own prior knowledge, experience or imagination. The investigator recorded each response exactly as the student articulated, together with factual, spelling or syntax mistakes if any. The students were scored for their response to each question for both getting the facts right and for constructing the sentence right. The difficulty level of questions and the length of story increased by grade. **Questions:** **3.1, 3.2, 3.3, 3.4, 3.5 (Grade 1)** **2.1, 2.2, 2.3, 2.4, 2.5 (Grade 2-4)**	***High:*** Answered the question correctly in full sentence. ***Medium:*** Correct answer but in incomplete sentence. ***Low:*** Incorrect answer, but in complete sentence. ***Extremely Low:*** Wrong response or no response at all.
Are the students able to respond to	In this case students were asked to read a	***High:*** Answered

questions based on a passage read by them? (The passages can be found in the text box below this table.)	passage themselves and respond in complete sentences to five different questions. Otherwise the approach to these questions was the same as in the box above. **Questions:** **9.1, 9.2, 9.3, 9.4, 9.5 (Grade 1)** **8.1, 8.2, 8.3, 8.4, 8.5 (Grade 2-4)**	the question correctly in full sentence. ***Medium:*** Correct answer but in incomplete sentence. ***Low:*** Wrong answer. ***Extremely Low:*** No response at all.

Table 23: Comprehension Assessment

Grade 1: *A cat had three kittens. One was black, one brown and one white. They saw a mouse and chased it. The mouse jumped into a box of flour. One by one, all three kittens jumped into the box of flour too. But by then the mouse came out of the box. The three kittens came out of the box, upset. They were all white by now.*

Grade 2: *There was a boy. His name was Ramu. He lived in a small hut with his mother. One day Ramu went to the market to sell his cow's milk. After wandering till evening he met a man. He asked Ramu for his cow in exchange for a magical hen. Ramu took the hen home. When his mother saw the hen she was angry. She threw the hen out of the window. When Ramu woke up next morning he saw three golden eggs laid outside the window. After seeing this Ramu and his mother became very happy. Now they live happily with hen.*

Grade 3: *Once, an ant was thirsty. She went to the river to drink water. There was a strong wind so the ant fell into the river and began to drown. At the same time a pigeon was flying overhead with a leaf. She saw the ant was drowning. She wanted to save the ant. To save the ant, she dropped the leaf in the river. The ant climbed on the leaf. The pigeon then held the leaf in her beak and lifted the ant out of the water. Hence the ant's life was saved.*

Sometime later the same ant was roaming in the jungle. She saw a hunter sitting with his net spread. The ant saw some birds coming towards the net. She understood that the hunter was awaiting these birds. The ant quietly crawled towards the hunter and bit his leg. The hunter screamed. The birds heard the scream and flew away from the net.

Grade 4: *There was a village. There was a huge tree outside it. Many exhausted people from the field rested under the tree on their way back home. A cuckoo lived on that tree. The cuckoo sang melodious songs. She comforted people of their tiredness by its songs. Once a hunter came under that tree. He spread his net under the tree. The cuckoo was caught in the net of hunter. The hunter was resting under that tree. The cuckoo sang such a melodious song that the hunter fell soundly asleep. The cuckoo was trying to gnaw the net but could not. At that moment there was a mouse passing by. The cuckoo asked to him- "Brother, would you help me out of the net? The mouse was very kind. He said- "Tell me, how can I help." The cuckoo said, "Cut open this net, so that I can come out." The mouse cut the net with its sharp teeth. The cuckoo was free when he cut the net. When the cuckoo was free, she sang a melodious song for the mouse. When the hunter woke up, he saw that the net was cut and also there was no cuckoo. He went home unhappy.*

3.1.5   Reading Fluency

Reading Fluency is the ability to read phrases and sentences smoothly and quickly, with appropriate expressions, while understanding them as complete ideas. Fluency is important because it provides a link between word recognition and comprehension. Fluent readers recognize words automatically and are able to group words quickly to help them gain meaning from what they have read. Readers who have not yet developed fluency read slowly, word by word, even letter by letter.

For the purpose of EGR Assessment, reading fluency of the students was assessed through a combination of observation of students as they read the passage and questions based on the same passage. The following table explains the schema of how students' reading fluency was assessed.

Reading Fluency		
Inquiry	**Administration Strategy**	**Competency Levels**

A.) Are the students able to read a passage?
 B.) Are the students displaying any facial or physical expressions as they read the passage?
 C.) Are the students following the punctuations marks?
 D.) What is the speed, in terms of words per minute, at which the students are able to read?
 E.) What percentage of words was read correctly by the students?
	The students were requested to read a passage. The investigator observed the students as they read the passage and timed them using a stopwatch. If the student was unable to start reading or go beyond the first few words in two minutes, the student was asked to discontinue. For the students who could read the passage, the investigator recorded the total time taken by the student to read the entire passage. The investigator also recorded the number of words which the student had read at the end of 4 minutes. In a separate recording sheet, the investigator marked all the words correctly or incorrectly as well as those words which the student read incorrectly initially but corrected themselves on her own. The investigator also marked whether the student gave appropriate pauses at the punctuation marks and expressions. The student was scored subsequently for each of the above attributes.
	
	 Questions:
	
	     A.) 9.1.1 for Grade 1 and 8.1.1 for all other Grades
	     B.) 9.2.1 for Grade 1 and 8.2.1 for all other Grades
	     C.) 9.2.2 for Grade 1 and 8.2.2 for all other Grades
	     D.) 9.2.3 for Grade 1 and 8.2.3 for all other Grades
	     E.) 9.2.4 for Grade 1 and 8.2.4 for all other Grades
		A.) Yes or No
		 B.) **High=** Read fluently throughout with right tone and gesture
		 Medium=Read fluently throughout with some tone and gesture
		
		     Low=Read letter by letter rarely using tone and gesture
		     Extremely low=Student hardly read and used no tone or gesture
		 C.) **High= Correct use of** punctuations throughout excerpt
		     Medium= Read word by word, pausing at punctuations but no change in tone throughout excerpt
		     Low= read word by word without pausing at punctuations
		     No pause or recognition of punctuations
		 D.) **High=**>50 words per minute
		     Medium= 31-50 words per minute
		     Low/poor= < 30 words per minute
		 E.) **High=**80-100% correct
		     Medium=50-80% correct
		     Low/poor= <50% correct

Table 24: Reading Fluency Assessment

3.1.6 Independent Writing

Writing is the ability to represent language in visual or tactile form, following the conventions of the given language. The ability to write is one of the two production-oriented language skills, the other being speaking. Though the reading and writing may appear to be distinct abilities to a lay person, research has demonstrated that development of both these abilities is intrinsically linked - development of reading strengthens writing abilities and vice versa. An analysis of writing provides a good indication of the reading ability of the writer in terms of their phonemic, phonic and comprehension abilities. It can be argued these abilities are likely to be well developed in a person/child with good writing ability.

For the purpose of this assessment, students of classes 2, 3 and 4 were asked to write a few lines to assess their writing ability.

Independent Writing		
Inquiry	**Administration Strategy**	**Competency Level**
Are the students able to write a few lines about some common/familiar exprinces?	The students of Grades 2, 3 and 4 were requested to write a few sentences about their experience. Students of each class had to write about a different type experience. Both the complexity of the experience and the number of sentences they were expected to write increased with every higher grade. Subsequently the students were scored for the number of sentences they wrote with least number of mistakes. **Question: 9 (Grade 2-4)**	*Grade 2:* **High**= Child wrote 2 sentences with correct grammar. **Medium**=Child wrote 2 sentences with incorrect grammar. **Low**=Child wrote one sentence with correct grammar. **Extremely low**=No response or child wrote only 1 sentence and with incorrect grammar. *Grade 3:* **High**= Child wrote 4 sentences with correct grammar. **Medium=** Child wrote 2-3 sentences with correct grammar. **Low=** Child wrote one sentence with correct grammar. **Extremely low=**No response or child wrote only 1 sentence with incorrect grammar. *Grade 4:* **High**= Child wrote 5-6 sentences with correct grammar. **Medium=** Child wrote 3-4 sentences with correct grammar. **Low**=Child wrote 1-2 sentences with correct grammar. **Extremely low**=no response or only

Table 25:Independent Writing Assessment

3.2 School survey cum observation tool

The second tool used in the study was a school survey cum observation tool to gain an understanding of the school facilities, practices and environment at school level. It was administered at all schools covered in the endline. The report provides a comparative analysis of the findings from baseline and endline across the project impact indicators as per the ToR. The following table provides a mapping of impact indicators along with areas of inquiry in the tool.

Impact indicators	Inquiry
1. Having facilities promoting reading (libraries, reading rooms/nature of materials)	• Schools having library • Students having access to library • Class display • Type of reading material
2. Having specific time for language in school time table	• Schools having time period for reading
3. Following time table	• Schools having time table • Schools following time table
4. Having enabling physical infrastructure	• Toilet availability for girls • Availability of water in toilet • Drinking water • Mid day meal (MDM) • Sitting arrangement during MDM • No hazards around school • Clean surroundings • Safety level of buildings • Sitting facility for children • Clean School Premise
5. Having forums that provide equal opportunities to children	• Opportunities for student during democratic forums • Participation of girls in democratic forums
6. Having platform that promote democratic values in children through activities like morning assembly, bal sabha	• Schools having Bal Sabha • Schools having Child Cabinet

Table 26: Indicators for school survey cum observation tool

1.1 Classroom observation and teachers interview tool

A classroom observation cum teacher interview tool used to understand classroom level facilities, practices, environment and pedagogy in the study schools. The tool included teacher and student level observation on different types of teaching methodologies, teacher behavior, assessment and planning. The report provides a comparative analysis of the findings from baseline and endline across the project impact indicators as per the ToR. The following table provides a mapping of impact indicators along with areas of inquiry in the tool.

Indicators	Inquiry
1. Using appropriate reading tools and techniques in language classrooms	• Types of teaching methodologies observed in classrooms • Use of reading materials in classroom

2. Having reading corners/rooms with appropriate materials for children	• Location of library in school • Class- reading corner
3. Having print rich environment	• Schools and classroom with print-rich environment
4. Displaying children work and use in classroom processes	• Classes having print rich environment consisting of resources created by children
5. Having conducive conditions (sufficient learning material, sitting arrangement, room conditions) to learning and reading.	• Sufficient space • Sufficient lighting • Usable blackboard • Chalk is available • Teachers ensure seating arrangement is comfortable

Table 27: Indicators for classroom observation tool

1.1 Individual structured questionnaire

A self-administered tool to assess the preparedness knowledge and perceptions of teachers, CRCCs and BRPs on early grade reading (EGR) and gender sensitivity was carried out. The report provides a comparative analysis of the findings from baseline and endline across the project impact indicators as per the ToR. The following table provides a mapping of impact indicators along with areas of inquiry in the tool.

Indicators	Inquiry
Teachers understanding on EGR and Gender Sensitivity	
1. Teachers agreement with the concept that boys and girls both should have access to early grade reading opportunities at school, home and community	• Selection of females in top 5 students in class • Perception of teachers regarding drop-out • Perception of teachers regarding highest achievement of students • Perception of teachers regarding career choices of top students • Perception on difference in reading opportunities for boys and girls
2. CRCCs and BRPs viewing gender based violence as less acceptable and safety and security of girls as an important priority	• Perception on gender based violence (GBV) in school • Change in own perception of GBV • Perception on safety and security as a priority in girls education
3. Teachers (gender and state-wise) having knowledge and skills on a. Reading approach and instruction methods b. Grade-wise competencies and assessment methods	• Over 30 self-administered questions on teacher's attitude and practices
4. Teachers sensitive to children needs and local cultures	• Needs and local culture taken into account while lesson planning
5. Teachers using appropriate reading approach/EGR methodology	• Teacher observation on multiple teaching methods used in a classroom.
6. Teachers using appropriate assessment tools to assess children reading level	• Observation on child assessment systems followed by teachers

Table 28: Indicators for self-administered questionnaire and teacher interview tool

Focus group discussions were held with School Management Committee members to understand community level practices concerning early grade reading and gender sensitivity.

Indicators	Inquiry
1. SMC agreement with concept that boys and girls both should have access to early grade reading opportunities at school, home and community	• Should boys and girls be given equal opportunities to study • Differences in challenges in boys and girls education
2. SMCs viewing gender based violence as less acceptable and safety and security of girls as an important priority	• Affect of gender based violence and safety and security of girls on their education
3. SMCs considering EGR as an important agenda	• Discussion on EGR in the previous SMC meetings • Action taken in this regard
4. SMCs initiating actions at community levels to address reading challenges (promotion of library, reading club, reading room, etc.)	• Action taken to improve EGR and girls education by the SMC

Table 29: Indicators for FGD tool for school management committee

2   Key Findings: School and classroom environment

This section aims to provide an overview of the learning context of students covered in the study. For the purpose of the study, it is assumed that the school, classroom and teachers form the learning context of a child in school. These findings are arrived from the analysis of the school observation, classroom observation and teacher interview tools. Majority of the analysis in the section is in the form of a comparative analysis of baseline and endline findings, while there are few indicators that were added to the tool in the endline, to provide a status of important program features at the time of the endline.
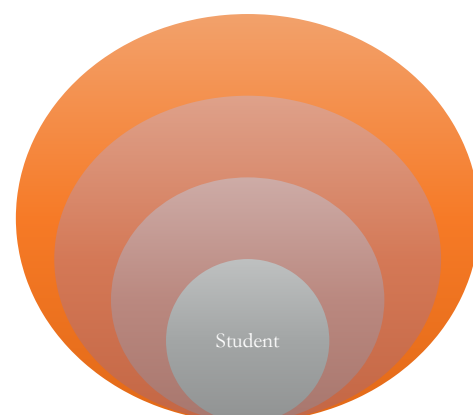
The sample size for this section of analysis is provided in the table given below; wherein the number of schools and classrooms covered in both the endline and baseline are mentioned.

District/State	School		Classroom	
	Endline	**Baseline**	**Endline**	**Baseline**
UP	42	38	66	58
Odisha	14	14	19	14
Total	**56**	**52**	**85**	**72**

Table 30: Sample size for school and classroom observation in baseline and endline

The findings are divided in the following five sections:
1.   Conducive conditions for learning and reading
2.   Availability of children's reading resources
3.   Creating print rich environment
4.   Ensuring use of library in classroom
5.   Creation of materials
6.   Teaching methodologies
7.   Teacher's gender sensitivity

2.1.1   Conducive conditions for learning and reading

This section focuses on findings that create conducive conditions for learning and reading in schools. This includes, a clean, safe and learning focused environment for the students.

	Uttar Pradesh		Odisha		Average	
	Endline (N=42)	**Baseline (N=38)**	**Endline (N=14)**	**Baseline (N=14)**	**Endline (N=56)**	**Baseline (N=52)**
Toilet is available and used by girls	48	28	64	36	56	32
Toilet has water for washing and flushing	33	11	14	75	24	43
There is drinking water for all children and teachers	93	84	71	54	82	69
Children were served meal as per menu	71	66	100	100	86	83

Table 31: Percentage of schools having enabling physical infrastructure

Toilet: There is an increase in the percentage of schools with toilets available and used for girls from the baseline, however it is still low. In UP, the percentage increased from 28% to 48% from 2015 to 2018 and in Odisha the increase was from 36% to 64%.

Availability of water in toilet: The availability of water in toilet reduced from 43% in the baseline to 23% in the endline. This fall is credited to the decline seen in the schools of Odisha where the percentage has reduced by 51 percentage points, from 24% in 2015 to 75% in 2018; while in UP, the percentage increased from 11% to 33%.

Drinking water: There is an increase in availability of drinking water in both states. The percentage has reached 93% in UP, however, it remains low in Odisha at 71%.

Mid-day meal: 71% of the schools were observed to be serving mid-day meal as per the set menu in UP and 100% in Odisha. The results for this indicator have increased marginally since the baseline in UP and have maintained its universal coverage in Odisha.

Timetable

There is a significant rise in the percentage of schools maintaining time tables in both states. In UP, the percentage increased from 34% in the baseline to 67% in endline (increase of 33 percentage points). While in Odisha, the increase was of 21 percentage points, from 50% in 2015 to 71% in 2018.

Further, 93% of schools were found to be using the timetables on the day of the survey in Odisha, and only 41% of the schools in UP. Additionally, 52% of the time tables had included a **reading period** in UP and 86% in Odisha.

Seating Arrangement in classrooms

At the classroom level it was observed that majority (greater than 90%) of the classrooms had sufficient space, lighting, use of blackboard and availability of writing material like chalk in both states. Further, both states saw a significant increase in the practice of teachers ensuring comfortable seating arrangement for students in class. The percentage of teachers who ensure **seating arrangement** of students is comfortable increased from 67% in the baseline to 80% in 2018 in UP. In Odisha, the percentage has increased from 57% to 90% in this period.

Equal opportunities and democratic forums

The following table provides the analysis for change in status of equal opportunities and democratic forums in schools.

	Uttar Pradesh (N=42)	Odisha (N= 14)	Overall (N=56)
School has minimum four child committees/ Bal Cabinet with children committees	41	57	49
All child committees are democratic formed (rotated and having gender representation)	48	71	60
School has the following child committees			
Morning assembly	52	100	76
Health and hygiene/cleanliness	26	86	56
Mid-day meal	29	93	61
Sports	24	64	44
Library	29	64	47
Participation of girls in committees			

Morning assembly	41	100	71
Health and hygiene/cleanliness	21	86	54
Mid-day meal	19	93	56
Sports	10	64	37
Library	14	64	39

Table 32: Indicators of equal opportunities and democratic forums in schools

- 41% of the schools in UP and 57% in Odisha reported having a minimum of 4 child committees. Further, 48% of the schools in UP and 71% in Odisha reported having democratically formed child committees.
- In UP, 52% of the schools had child cabinets for morning assembly, 26% for health and hygiene, 29% for mid-day meals, 24% for sports and 29% for library. Further, a lower percentage of schools reported having participation of girls in the child cabinets.
- In Odisha, 100% of the schools had child committees for morning assembly, 86% for health and hygiene, 93% for mid-day meals, 64% for sports and 64% for library. All schools with child cabinets have participation of girls in each of them.

2.1.2 Availability of resources for children's reading

During the endline study, schools in both UP and Odisha were found to have a variety of reading resources appropriate for students present in the school. Details for the same are provided in the graphs below.

	Uttar Pradesh (N=42)	Odisha (N= 14)	Overall (N=56)
Class Text books	64	100	82
Children's Magazine (Ex. Champak, Magic Pot etc.)	55	36	46
Standard Story Books	69	71	70
Picture Charts	76	86	81
Children created resources	50	57	54

Table 33: Availability of resources

2.1.3 Print-rich Environment

During the endline, 64% of the schools in UP and 100% schools in Odisha had a print-rich environment in the schools. The percentage of schools where the display is placed too high to be visible to students has reduced from the baseline to the endline . However, the schools where there is display that is interesting and at the eye level of students has seen a substantial decline from the baseline to the endline (from 83% in 2015 to 64% in 2018). [2]

Overall, the schools had a variety of print rich resources present, 43% of the schools had teacher led learning materials in UP and 71% in Odisha. 57% of the schools in both states had poems, rhymes on walls or charts. 57% had story displayed in UP and 64% schools in Odisha. 76% of the schools in UP and 100% Odisha had number charts.

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[2] This percentage is a lowered representation of the indicator as the print rich material was taken off during recent protests in the school.

2.1.4 Use of library in classroom

The following table provides an analysis of the status of school level facilities such as library, reading rooms and resources promoting reading in the baseline and endline.

- **Library**: There is a significant increase in the percentage of schools having a library in UP, in comparison to the baseline, the percentage increased from 45% in 2015 to 79% in 2018. In Odisha, however, the percentage was 100% in both baseline and endline.
- **Availability of books in library**: Further, the percentage of schools where appropriate reading books for students are available in sufficient quantity increased from 14% in baseline to 36% in UP and remained nearly stagnant n Odisha from 40% in baseline to 36% in endline.
- **Access to library**: Percentage of schools where the library is accessible to students whether in classroom or separate room is stagnant in UP at 40%, whereas, the percentage has increased from 40% in the baseline to 64% in endline in Odisha.

	Uttar Pradesh		Odisha		Average	
	Endline (N=42)	Baseline (N=38)	Endline (N=14)	Baseline (N=14)	Endline (N=56)	Baseline (N=52)
Schools having Library	79	45	100	100	90	73
Schools having library with appropriate books for children in sufficient quantity	36	14	36	33	36	24
Library is located in classroom/separate room and is accessible to students	36	40	64	40	50	40
Children can understand the display but it is placed too high on the wall and not easily visible to the children.	14	25	14	10	14	18
Display is interesting for and easily understood by children and is also placed at their eye level so that they can see easily.	57	75	71	90	64	83

Table 34: School facilities promoting reading (in % of schools)

Further, 41% of the classrooms, in UP, had reading corners where books were accessible to students, 74% of the classrooms in Odisha had reading corners.

2.1.5 Creation of materials

26% of the schools in UP and 86% of the schools in Odisha had resources created by children displayed in schools. Overall, the percentage of classrooms with no display of children's work has reduced from 83% in the baseline to 35% in 2018 in both states. The table below depicts the percentage of classrooms that display the works of students.

Percentage of classrooms with no display of children' work in the class.					
Uttar Pradesh		Odisha		Average	
Endline (N=66)	Baseline (N=58)	Endline (N=19)	Baseline (N=14)	Endline (N=85)	Baseline (N=72)
48	86	21	80	35	83

In the endline, 52% of the classrooms in UP and 79% in Odisha have a display of children's work. The percentage of classrooms that do not have any display of children's work has reduced from 86% in the baseline to 48% in the endline in UP and from 80% to 21% in Odisha.

Among the classrooms with display of children's work, majority of the charts were of **pictures made by students** in both states. In UP, 50% of the charts were pictures, 12% stories, 12% poems and 7% experimental or independent writing. While in Odisha, 86% were pictures, 50% were stories, 43% poems and 29% experimental writing.

The following table presents findings on observations regarding materials used in classroom.

	Uttar Pradesh		Odisha		Average	
	Endline (N=66)	Baseline (N=58)	Endline (N=19)	Baseline (N=14)	Endline (N=85)	Baseline (N=72)
Teachers using TLMs other than black boards, textbooks	88	26	63	64	76	45
Teacher uses library books while teaching	67	14	32	50	50	32
Teacher creates and use print rich material in classroom transaction	53	2	42	29	48	16
Materials are used by girls	59	2	37	50	48	26
Materials are used by boys.	61	0	37	50	49	25

Table 36: Reading materials and their usage observed in classroom (in %)

- The percentage of classrooms where TLMs were used increased from 26% in baseline to 88% in endline in UP and remained stagnant at 63% in Odisha.
- The percentage of classrooms where teachers used library books while teaching increased in UP and reduced in Odisha.
- 53% of the teachers observed created and used print rich material in classrooms in UP and 42% in Odisha. There is a significant increase in this parameter in both states.
- The parentage of classrooms where materials are used by boys and girls is similar in both states, 59% for girls and 61% for boys in UP and 37% for both boys and girls in Odisha.

2.1.6 Teaching Methodologies

There is a significant change visible in the **variety of teaching techniques** observed in the baseline and endline in the classrooms. The following table presents the percentage of teachers using different teaching methodologies in a language class.

Distribution of teaching methodologies						
	Uttar Pradesh		Odisha		Average	
	Endline (N=66)	Baseline (N=58)	Endline (N=19)	Baseline (N=14)	Endline (N=85)	Baseline (N=72)
Explain /Lecture/questioning	85	69	89	79	87	74
Guided Discussion	56	16	63	43	60	30
Role Play	32	0	42	29	37	15
Games played while sitting	6	2	32	14	19	8
Peer Reading	47	14	68	57	58	36
Oral activity	76	45	89	71	83	58

Other Method	56	16	58	43	57	30

Table 37: Teaching methodologies observed in classrooms

Overall, lecturing, explanation and questioning continues to be the most commonly observed technique used for teaching in classroom in the endline as it was in the baseline. It was observed in 85% of the classrooms in UP and 89% in Odisha. It has seen an increase of 16 percentage points from the baseline in UP and 10 percentage points in Odisha. The second highest method observed is oral activity, which has seen a significant increase in the endline, especially in aspects like teacher choosing oral acitivies based on real life experiences of children and linking such activities to written text.

However, use of other non-traditional techniques such as guided discussion, peer reading, oral activity, role playing have also increased significantly. In UP, methods such as guided discussion, role play, peer reading and oral activity have increased from the baseline by 40, 32, 33, 31 percentage points receptively. In Odisha, the highest increase is seen in guided discussion which is of 20 percentage points, there is an increase of 18 percentage points in games played while teaching and oral activity as well.

2.1.7   Teacher's gender sensitivity

The following table presents the percentage of teachers naming girls in the top five positions in their class.

Percentage of teachers selecting females as the top 5 students in class						
	UP		Odisha		Overall	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
First best	42	57	77	52	60	55
Second best	52	36	77	42	65	39
Third best	46	21	62	46	54	34
Fourth best	39	36	39	42	39	39
Fifth best	46	43	46	42	46	43
Average	45	39	60	45	53	42

Table 38: Selection of females in top 5 students (in %)

On an average, the percentage of naming girls in the top five positions has increased in the endline, in comparison to the baseline. This is increase is evident in both states in the study. This represents the changing perception of teachers towards performance of girls in education.

The next table presents the highest achievement of top two students predicted by the teachers.

Highest achievement of the top two students predicted by the teacher (in %)						
			High School	Intermediate	College/ University	No Response
Overall	2018	Boys	7	1	38	54
		Girls	7	11	27	55
	Baseline	Boys	14	12	37	37
		Girls	21	15	36	28
UP	2018	Boys	6	2	38	55
		Girls	8	14	32	47
	Baseline	Boys	19	14	38	30
		Girls	21	18	35	26
Odish	2018	Boys	11		37	53

a		Girls	5		11	84
	Baseline	Boys	0	0	29	71
		Girls	7	0	43	36

Table 39: Percentage of teachers predicting highest achievement of top 2 students (in %)

- In UP, a higher percentage of teachers predicted that students of their class will study till college or university. Additionally, there is no change in this indicator from the baseline. Further, there is no significant gender difference in the same.
- In Odisha, a gender difference in the results is evident. While 37% of the teachers in UP reported boys will study till college or university, 11% of the teacher reported girls will study upto this level.

Predicted career choices for the top two students by teachers (in %)							
			Job/Naukari/ Services	Teacher	Business	Doctor	Others
Overall	2018	Boys	65	7	0	2	26
		Girls	42	14	0	0	44
	Baseline	Boys	23	19	8	8	44
		Girls	19	20	3	1	57
UP	2018	Boys	73	5	0	2	21
		Girls	50	8	0	0	42
	Baseline	Boys	22	16	8	4	50
		Girls	19	10	3	2	66
Odisha	2018	Boys	37	16	0	5	42
		Girls	16	37	0	0	47
	Baseline	Boys	14	21	7	21	36
		Girls	7	64	0	0	7

Table 40: Percentage of teachers predicting career choice of students (in %)

The following table presents the opinion of teachers on gender equity in education during endline:

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	No Response
Boys should be given more opportunities to read in school as they are more likely to use these skills	UP	33	24	1	27	11	4
	Odisha	42	27	4	15	8	4
	Total	36	24	2	24	10	4
Girls suffer more violence at school than boys	Uttar Pradesh	20	58	4	11	4	4
	Odisha	23	62	0	12	4	0
	Total	21	59	3	11	4	3
My acceptance for gender-based violence has reduced significantly in comparison to past	Uttar Pradesh	9	14	5	41	20	12
	Odisha	4	4	0	65	27	0
	Total	8	11	4	47	22	9

Table 41: Teachers' perception on gender equity in education (%)

- While this data was only collected in the endline, hence a comparison with the baseline is not possible. However, it is evident that there is a significant percentage of teachers in the state of UP (38%), who believe that boys should be given more opportunities than girls to read in school.
- Majority of the teachers (nearly 80%) do not believe that girls are discriminated against when it comes to violence in school. In other words, majority of the teachers across both states disagree with the statement that girls suffer more violence at school than boys.
- Close to 70% of the teachers expressed feeling that their acceptance for gender based violence has reduced in comparison to the past.

4   Key Findings: Competency-wise

The following section presents the findings of the child assessment survey. The findings are presented in the form of percentage of students demonstrating presence of a competency. For example, the section on listening comprehension provides the findings on percentage of students competent in listening comprehension. In this section, students scoring A and B, i.e. high or medium in the survey questions are considered as competent in the sub-test whereas those scoring C, D or E are considered as lacking competency.

4.1   Reading context- home environment

What do students have in their bags?
Do students have access to reading material beyond school books at home?
Do students receive support in studies at home?
Are they told stories at home?

The four above mentioned questions were used to determine whether students have a supportive environment for reading at home. Students responding affirmatively in all four of the above indicators are termed to have an ideal home environment. In other words, a student is said to have an ideal home environment for reading if he/she has- basics such as a book, a notebook or slate, a pen, pencil or chalk in their school bag; has access to reading material other than school books at home; receives support from someone in reading at home; and is told stories at home.

The table below presents the percentage of students, in each grade, who have an ideal environment at home specific to early grade reading:

Percentage of students having an ideal home environment for reading						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	17	2	48	15	33	9
Grade II	24	4	53	17	39	11
Grade III	35	5	59	30	47	18
Grade IV	34	4	69	30	52	17
Average of all grades	28	4	57	23	43	14

Table 42: Grade-wise comparative table for home environment (in %)

- Overall, 43% of the students have an ideal home environment for reading in 2018. There is a remarkable increase in 29 percentage point since the baseline.
- In UP, 28% of the students across all grades are known to have ideal home environment for EGR, while 57% complied to all four measures under this indicator in Odisha. UP has seen a 24 percentage point rise since the baseline while Odisha has a 34 percentage point increase since baseline.

The following tables present the findings in each of the four measures for home environment separately.

The first table presents the percentage of students, **who were carrying essential material required for reading in their bag, as per grade.** This percentage is calculated based on students who had a book, a notebook or slate and either a pen, pencil or chalk in their bags on the day of the survey.

Percentage of students carrying essential material for reading						
	Uttar Pradesh (%)		**Odisha (%)**		**Average (%)**	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
Grade I	88	64	90	62	89	63
Grade II	94	61	92	64	93	63
Grade III	97	74	93	73	95	74
Grade IV	96	76	95	67	96	72
Average of all grades	94	69	93	67	94	63

Table 43:Grade-wise comparative table for students that carry essential material for reading in bag (in %)

- Overall, 94% of the students were carrying the essential material required for reading in their bags.
- This percentage has increased by a good amount of 31 percentage points since the baseline.
- The results are similar in both states, 94% in UP and 93% in Odisha, making an increase of 25 and 26 percentage points respectively.

The next table presents the percentage of students in each grade, **who had access to additional reading material at home.**

Percentage of students having additional reading material at home						
	Uttar Pradesh (%)		**Odisha (%)**		**Average (%)**	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
Grade I	38	10	63	31	51	21
Grade II	50	17	78	36	64	27
Grade III	61	12	74	54	67	33
Grade IV	62	12	84	66	73	39
Average of all grades	53	13	75	47	68	30

Table 44:Grade-wise comparative table for students having access to reading material at home (in %)

- This percentage is on the higher side in both states.
- Overall, 68% of the students reported having access to additional reading material at home in 2018. This figure increased remarkably 38 percentage points since the baseline.
- The results in UP show a remarkable increase in this indicator since the baseline. 53% of the students were told stories at home. This indicator increased by 40 percentage points since the baseline.
- In Odisha, 75% of the students claimed to have access to reading material. The percentage of students responding affirmatively has increased by 28 points from the baseline.

The table below presents the percentage of students, in each grade, who were told stories at home.

Percentage of students told stories at home						
	Uttar Pradesh (%)		**Odisha (%)**		**Average (%)**	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	45	23	78	60	62	42
Grade II	49	24	75	64	62	44
Grade III	54	22	83	63	69	43
Grade IV	54	27	85	65	70	46
Average of all grades	51	24	80	63	66	44

Table 45:Grade-wise comparative table for students told stories at home (in %)

- Overall, 66% of the students reported being told stories at home. This percentage increased 22 points since the baseline.
- 51% of the students were told stories at home. This indicator increased by 27 percentage points since the baseline.
- 80% of the students in Odisha were found to be told stories at home. There is an increase in 17 percentage points since the baseline.

The table below presents the percentage of students, in each grade, who receive support in studies at home.

Percentage of students receiving support in studies at home						
	Uttar Pradesh (%)		**Odisha (%)**		**Average (%)**	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
Grade I	62	47	95	86	79	67
Grade II	69	46	96	84	83	65
Grade III	72	42	98	88	85	65
Grade IV	69	54	98	88	84	71
Average of all grades	68	47	97	87	83	67

Table 46:Grade-wise comparative table for students receiving support at home (in %)

- Overall, 83% of the students reported receiving support in studies at home.
- This is higher than the percentage of students who were told stories at home in both states.
- In comparison to the baseline, this percentage has increased 16 percentage points.
- In UP, this percentage is 68% i.e. making an increase of 21 percentage points since 2015.
- In Odisha, 97% of the students received support at home. There is an increase of 10 percentage points since the baseline.

4.2   Understanding Status of Children having learning abilities

As mentioned in the previous section, students with high and medium competency levels represent presence of competency and those with low and very low scores have absence of competency. Similar analysis is conducted for following reading subtask:

- Level of oral reading awareness in different grades,
- Level of phonemic awareness in different grades,
- Level of phonic awareness in different grades,
- Level of listening comprehension in different grades,
- Level of reading fluency in different grades,
- Level of reading comprehension in different grades, and
- Level of reading fluency with comprehensive against bench mark in different grades

4.3   Reading Context- Fluency in spoken language

Are students able to recognize and describe pictures?

Reading context is determined by students' fluency in spoken language or oral language development. This is one of the basic competencies required for development of early grade reading. For the purpose of the assessment, this competency is assessed by a child's ability to name (picture recognition) and describe (descriptive language) familiar objects.

4.3.1   Descriptive Language

Descriptive Language assesses the ability of students to describe pictures using the syntax of language. This is only assessed for students of grade I.

The table below presents the percentage of grade I students having descriptive language competency in each year, since the baseline.

Percentage of students competent in descriptive language grade I						
	Uttar Pradesh (%)		**Odisha (%)**		**Average (%)**	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
Grade I	98	25	98	21	98	23

Table 47:Grade I comparative table for descriptive language (in %)

- Nearly entire sample of grade I students became competent in descriptive language in 2018. The competency saw an improvement of 75 percentage points since the baseline.
- In UP, 98% students demonstrated having the ability to use descriptive language in 2018. This percentage improved 73 percentage points..
- The status in 2018 Odisha is that 98% of students having competency in descriptive language. This increased from 21% in 2015 by 77 percentage points.

4.3.2   Picture Recognition

Picture recognition is another indicator to assess oral language development. It is the ability of students to identify names for familiar objects. The table below presents the grade-wise percentage of students competent in picture recognition since the baseline:

Percentage of students competent in picture recognition			
	Uttar Pradesh (%)	**Odisha (%)**	**Average (%)**

	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	100	95	100	100	100	98
Grade II	100	95	98	98	99	96
Grade III	93	84	86	81	90	83
Grade IV	94	91	90	90	92	91
Average of all grades	97	91	94	92	95	91

Table 48:Grade-wise comparative table for picture recognition (in %)

- Competency for picture recognition was already high in the baseline i.e. an average of 91 percent. In 2018, it increased further to reach 95% with an increase of 4% since the baseline.
- In UP, the percentage of students competent at picture recognition is 97%. On an average, the increase is only 6 percentage points since the baseline.
- In Odisha too, the level of competency of picture recognition is 94% in 2018. The percentage increased 2 points since the baseline, similar to UP.

4.4 Phonemic Awareness

Can students distinguish different phonemes in familiar words?
Can students identify phonemes occurring in the beginning of a word more easily as compared to the ones occurring later?
Can students identify two words starting with the same phoneme?

After fluency in spoken language, phonemic awareness is the second step towards early grade reading. It is the ability of a student to identify phonemes. This competency was assessed by a question on identification of the first sound in simple words read out to the students.

The table below presents the level of phonemic awareness, in each grade, since the baseline:

Percentage of students competent in phonemic awareness						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	72	11	78	46	75	30
Grade II	87	24	94	63	90	44
Grade III	89	32	91	88	90	60
Grade IV	95	40	94	76	94	58
Average of all grades	86	27	89	68	87	48

Table 49:Grade-wise comparative table for phonemic awareness (in %)

- Overall, 87% of students have phonemic awareness in 2018. This has increased 47 percentage points since 2015.
- 86% of the students are competent in phonemic awareness in UP in 2018, wherein the performance of students improved 59 percentage points since the baseline.
- In Odisha, 89% of the students demonstrated competency. The increase in this state is 21 percentage points since the baseline.
- Further, in UP, there is an increasing trend in level of phonemic awareness with each higher grade. The percentage of students having this competency increases gradually from 72% in grade I to 87% in grade II, 89% in grade III and 95% in grade IV.

- The trend is different in Odisha, where the level of phonemic awareness is quite high grade II onwards. 78% of the students have phonemic awareness in grade I, followed by 94%, 91% and 94% in grades II, III and IV respectively.

4.5 Phonic Awareness

Can students identify simple or complex letters and articulate their respective sounds?
Can students read individual words?
Can students write words dictated to them?

After assessing the ability to identify phonemes. The ability of a child to manipulate phonemes by linking sound to symbols is assessed under the reading subtask of phonic awareness. This competency is assessed by three questions: letter identification, word reading and dictation.

4.5.1 Letter Identification

This indicator analyses the ability of students to identify alphabets (in Hindi or Oriya). The table below presents the competency of students in letter identification in each grade, since the baseline:

Percentage of students competent in letter identification						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	62	27	83	83	73	55
Grade II	80	51	95	93	88	72
Grade III	90	60	95	98	93	79
Grade IV	93	79	94	98	93	89
Average of all grades	81	54	92	93	87	72

Table 50:Grade-wise comparative table for letter identification (in %)

- Overall, the ability of letter identification has increased among the students by 15 percentage points from 72 percent during baseline to 87 percent during end line.
- A significant increase is evident in the percentage of students competent in letter identification in UP since the baseline. The percentage of students able to identify letters has increased 27 percentage points, from 54% in 2015 to 81% in 2018.
- In Odisha, the overall level of competency has been stagnant throughout, but it is already quite high at 92%.

4.5.2 Word Identification

Word identification is the ability of students to read familiar words. This is the second indicator assessed under phonic awareness.

The table below presents the changes in competency of word identification, in each grade, since the baseline:

Percentage of students competent in word identification						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	19	11	74	63	47	37

Grade II	28	19	71	71	49	45
Grade III	42	27	81	85	62	56
Grade IV	55	38	83	88	69	63
Average of all grades	36	24	77	77	57	50

Table 51:Grade-wise comparative table for word identification (in %)

- Overall, 57% students have shown competency in this indicator. There is an increase of 7 percentage points since the baseline study.
- In Uttar Pradesh, 36% students are competent in word identification in 2018. There has been an 12 percentage point increase in the performance of word identification since 2015.
- In Odisha, 77% students exhibited competency in word identification in 2018. The competency level has been stagnant since the baseline with minor rise and fall in the percentage points over the years.

4.5.3   Dictation

The table below presents the changes in performance in dictation, in each grade, since the baseline:

Percentage of students competent in dictation						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	20	6	61	42	40	24
Grade II	28	12	45	41	36	26
Grade III	37	16	46	32	41	24
Grade IV	50	28	48	53	49	41
Average of all grades	34	16	50	42	42	29

Table 52:Grade-wise comparative table for dictation (in %)

- Overall, 42% students were found to be competent in this indicator. There is an increase of 13 percentage points since the baseline study. We could find a moderate growth in the competency over the years since the baseline.
- The performance in UP has improved 18 percentage points since 2015. Overall, 34% of the students are competent in dictation, up from 16% in 2015. Similar to other competencies, the performance in dictation improves with higher grades. It is low with 20% of the students having the competency in grade I and increases up to 50% in grade IV.
- Odisha does not follow the same increasing pattern. The percentage of students having the competency is highest in grade I (61%), this decreases in higher grades, being the lowest in grade III. Overall, 50% of the students are competent in dictation in Odisha in 2018, 8 percentage points up from the baseline, where 42% of the students were competent in dictation.

4.6   Comprehension

Can students respond to questions about a passage read to them?
Can students respond to questions about a passage read by them?

4.6.1   Listening Comprehension

The table below presents the changes in listening comprehension, in each grade, since the baseline:

Percentage of students competent in listening with comprehension						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	96	40	93	53	94	46
Grade II	98	45	87	41	92	43
Grade III	93	38	98	68	96	53
Grade IV	93	32	91	66	92	49
Average of all grades	95	39	92	57	94	48

Table 53:Grade-wise comparative table for listening comprehension (in %)

- Overall, 94% students were found to have competency in listening comprehension. There was a rise of 46 percentage points since the baseline.
- In UP, from 39% in the baseline, listening comprehension has reached 95% in 2018, the increase is of 56 percentage points since baseline. Grade-wise analysis shows the competency is at near universal level in grades I and II (96% and 98% respectively), such that nearly all students are able to respond correctly to two out of five questions based on a passage read to them. The competency is very high in grade III and IV as well (93% and 93% respectively).
- In Odisha too, the competency has increased from 57% in baseline to 92% in 2017. Overall, there is a 35 percentage point increase since the baseline. Grade-wise analysis shows, listening comprehension is high in grades I, II and IV (93%, 87% and 91% respectively) and near universal level in grades III (98%) .

4.6.2   Reading comprehension
Are students able to respond to questions based on a passage read by them?

Reading comprehension is one of the key indicators in the early grade reading assessment. It is judged by a student's ability to correctly respond to at least two out of five questions based on a passage read by them.

The following table represents the changes in students reading with comprehension competency as per grade over the three years of the program.

Percentage of students competent in reading with comprehension						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	8	2	44	9	26	5
Grade II	25	9	41	23	33	16
Grade III	40	15	64	41	52	28
Grade IV	59	27	50	45	54	36
Average of all grades	33	13	50	30	41	21

Table 54:Grade-wise comparative table for reading comprehension (in %)

- In endline, overall more percentage of student acquired ability to read with comprehension. There has been change of 20 percentage point from 2015 to 2018, read with comprehension increased from 21% in the baseline to 41% in endline. The rise is evident in both states.
- Overall, 33% of the students in UP were found to be competent in reading comprehension. The competency increases with each higher grade, highest in grade IV where 59% of the students being able to read with comprehension. There is an overall increase of 20 percentage points since the baseline study.
- In Odisha, there has been enhancement in children reading level seen in the endline; students having reading with comprehension increased 20 percentage points from 2015 (30 percent) to 2018 (50%). However, a grade-wise analysis shows the competency in reading comprehension is inconsistent. Grade I and II have a similar competency (44% and 41% respectively). There is a rise of competency in grade III (64%), which comes down to 50% in grade IV.

Gender and Caste analysis
The following table provides a gender based analysis of students reading with comprehension.

Gender-cut of students competent in reading with comprehension												
	Uttar Pradesh (% of children)				Odisha (% of children)				Overall (% of children)			
	Endline		Baseline		Endline		Baseline		Endline		Baseline	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Grade I	9	8	3	2	47	41	7	11	28	24	5	7
Grade II	29	21	11	6	42	39	21	22	35	30	16	14
Grade III	37	43	19	11	61	67	35	41	49	55	27	26
Grade IV	62	57	29	24	42	60	43	45	52	58	36	34
Average of all grades	34	32	15	11	48	52	26	30	41	42	21	20

Table 55: Gender-wise comparative table for reading comprehension as per grade (in %)

- Overall, there is no significant difference noted in the reading comprehension competency between genders. 41% of the male and 42% of the female students were competent in reading with comprehension in the endline. This is similar to the baseline, where too, there was no significant gender gap between boys and girls.
- Similar to the baseline, the competency between genders is largely similar with a marginal variation in the both states. While in UP, the performance of boys is marginally better than the girls in the endline (2 percentage points) as in the baseline. In Odisha, the performance of girls is marginally better in the endline & baseline than boys (by 4 percentage points). It is also important to note that the performance of boys and girls varies across grades.

The following table provides a caste based analysis of students reading with comprehension.

	UP				Odisha		
	General	SC	Minority	OBC	SC	ST	OBC
Grade I	17	7	11	7	73	36	67
Grade II	21	25	16	21	0	27	50
Grade III	49	32	35	31	33	47	58
Grade IV	77	42	43	43	57	51	62
Average of all grades	41	27	26	26	41	40	59

- In the endline, the percentage of students from each of the caste categories who are able to read with comprehension, varies with each grade.
- Overall, in UP, the students belonging to general caste have performed better than other castes.
- In Odisha, where the coverage was majorly in SC, ST and OBC- the students from OBC have performed better than the other two categories.

4.7 Reading fluency

Are the students able to read a passage?
Are the students displaying any facial or physical expressions as they read the passage?
Are the students following the punctuations marks?
What is the speed, in terms of words per minute, at which the students are able to read?

4.7.1 Reading
Did the child read the passage?

The table below presents the percentage of students being able to read the text (grade appropriate story), as per grade, since the baseline:

Percentage of students able to read the passage						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	8	8	26	27	17	18
Grade II	26	16	46	52	36	34
Grade III	41	29	68	75	55	52
Grade IV	57	43	77	87	67	65
Average of all grades	33	24	54	60	44	42

Table 57:Grade-wise comparative table for reading (in %)

- Overall, 44% of the students were found to be competent in reading. There is an increase of 2 percentage points in this indicator since the baseline.
- In UP, the percentage of students able to read the text increased from 24% in the baseline to 33% in endline. The performance improved by 9 percentage point since 2015.
- In Odisha, 54% students were able to read the text in 2018. There is a decrease in the competency since the baseline study. The competency of students in Odisha has gone down by 6 percentage points in this indicator.

Gender and Caste analysis

The following table provides a gender based analysis of students who were able to read the passage.

Gender-cut of students able to read the passage						
	Uttar Pradesh (% of children)		Odisha (% of children)		Overall (% of children)	
	Male	Female	Male	Female	Male	Female
Grade I	7	9	27	24	17	16
Grade II	30	22	46	45	38	34

Grade III	39	43	64	73	51	58
Grade IV	60	53	76	80	68	67
Average of all grades	34	32	53	56	44	44

Table 58: Gender-wise comparative table for reading as per grade (in %)

- Overall, 44% of both boys and girls were able to read the passage. However, there is variation in percentages between genders as per state and grade.
- In UP, boys are more competent in reading in grade II and IV, whereas girls are more competent in grade III.
- In Odisha, the results for boys and girls able to read the passage is similar in grade I, II and IV, a higher percentage of girls were able to read passages in grade III.

The table below shows the caste-wise breakup of students able to read the passage during the endline survey.

	UP				**Odisha**		
	General	SC	Minority	OBC	SC	ST	OBC
Grade I	83	52	62	54	71	74	90
Grade II	49	41	47	36	67	63	88
Grade III	31	29	25	23	17	45	64
Grade IV	13	8	9	7	55	17	48
Average of all grades	44	33	36	30	52	50	72

Table 59: Caste-wise comparative table for reading as per grade (in %)

- In UP, students belonging to general caste performed best among all caste categories. The difference between performance of students across castes is most prominent in grade I and reduces in subsequent grades.
- In Odisha, differences are evident in the performance of students of different castes however the results are fluctuating with each grade. While the students from OBC background are performing better than other castes in grades I, II and III, they SC students have a higher percentage in grade IV. It is important to note here that the percentage of OBC and SC students covered in Odisha is significantly less than ST. Hence, there is no clear pattern emerging in the results of students reading the passage.

4.7.2 Reading with expression
Did the students who could read the excerpt display correct tone and gesture?

Reading with expression is tested by a students' display of tone and gesture while reading. The table below presents the changes in this indicator in each grade since the baseline:

Percentage of students competent in reading with expression						
	Uttar Pradesh (%)		**Odisha (%)**		**Average (%)**	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	6	3	19	4	12	3
Grade II	16	9	29	8	22	9
Grade III	24	19	50	20	37	20
Grade IV	38	25	59	25	49	25
Average of all grades	21	14	39	14	30	14

Table 60:Grade-wise comparative table for reading with expression (in %)

- Overall, 30% students were able to read with proper expressions. There was an increase of 16 percentage points since the baseline in this indicator.
- There has been an increase of 7 percentage points in UP, from 14% students reading with expression in 2015 to 21% in 2018. The competency increases gradually with each higher grade in UP; while only 6% students were able to read with expression in grade I, in 2018, the percentage increased to 38% in grade IV.
- In Odisha too, this competency has improved by 25 percentage points, from 14% in 2015 to 39% in 2018. The level of competency increased from 19% in grade I, to 29% and 50% in grades II and III respectively and then increases further to 59% in grade IV in 2018.

4.7.3 Reading with Punctuation
Are the students following the punctuations marks?

The table below presents the changes in student's ability to make use of punctuation while reading, in each grade, since the baseline:

Percentage of students competent in use of punctuation						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	5	1	18	14	11	8
Grade II	17	7	26	24	22	16
Grade III	22	16	44	24	33	20
Grade IV	35	22	59	36	47	29
Average of all grades	20	12	37	25	28	18

Table 61:Grade-wise comparative table for reading with punctuation (in %)

- Students' ability to make use of punctuation has seen a slow rise since the baseline. It has increased by 10 percentage points from 18 percent at the time of baseline to 28 percent in 2018.
- The percentage of students competent in use of punctuation is 20% in UP in 2018. The increase has been of only 8 percentage points since the baseline. While the competency was nearly stagnant in 2016 and the improvement majorly took place in 2017. The ability to use punctuation increases as students go to higher grades. It is least developed in grade I with only 5% students in UP and 18% students in Odisha demonstrated having these competencies.
- In Odisha, 37% of the students are competent in using punctuation. The increase from baseline is of 12 percentage points. Similar to display of expressions, Odisha sees a rise in this competency in grade II itself, stagnant in grade III, followed by a further increase in grade IV.

4.7.4 Reading speed
What is the speed, in terms of words per minute, at which the students are able to read?
The grade-wise average reading speed of students across the three assessments shows a fluctuating trend over the years. This may be due to the change in the minimum speed criteria required to attempt the question on reading.

The minimum speed required to attempt this question in 2017 was reduced from 15 wpm to 5wpm in order to include slow readers in the assessment of other indicators like reading comprehension. This affects the average reading speed in a way that the slow readers bring the average speed down. Hence the data sets of pre-2017 average reading speed and post-2017 average reading speed should not be compared with each other and should be treated separately.

The table below presents the average reading speed of students in each grade as per the relevant criteria followed in each year:

Average reading speed per grade (in words per minute)						
	Uttar Pradesh (in wpm)		Odisha (in wpm)		Average (in wpm)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	29	14	28	26	29	20
Grade II	44	29	37	34	41	32
Grade III	53	34	49	50	51	42
Grade IV	58	39	59	62	59	51
Average of all grades	46	29	43	43	45	36

Table 62:Grade-wise comparative table for reading speed (in wpm)

- The average reading speed including students from both states in 45 words per minute. This percentage is higher than the benchmark set for reading speed i.e. a minimum speed of 40 wpm.
- The average reading speed in UP is 46 wpm which is 17 wpm more than that in the baseline study.
- The average reading speed in Odisha is 43 wpm, which remains stagnant since the baseline study.
- Both the states have crossed the benchmark set for competency in reading speed i.e. 40 words per minute.

4.7.5 Reading fluency

Reading fluency is calculated based on the reading speed of a student. Students being able to read at a speed equal to or greater than 40 words per minute were scored as having the ability to read fluently.

Reading fluency is determined by students who are able to read at a speed equal to or greater than 40 words per minute. The table below presents the changes in students' ability of reading fluently as per grade, since the baseline:

Percentage of students reading fluently						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	2	0	7	4	5	2
Grade II	12	4	17	17	15	11
Grade III	26	12	37	44	32	28
Grade IV	38	17	59	68	49	43
Average of all grades	20	8	30	33	25	21

Table 63:Grade-wise comparative table for reading fluency (in %)

- Overall, 25% students were able to read fluently i.e. they could read at least 40 words per minute. The competency has increased by 4 percentage points since the baseline study.
- In the state of UP, 20% students were competent in reading fluency in 2018, up from 8% in 2015. With an exception of grade I, there is a small improvement in students reading fluently, in each grade. The increase is of 8 percentage points in grade II, 14 points in grade III and 21 percentage points in grade IV, since 2015. Further, the competency improves in each higher grade, percentage of students reading 40 or more words per minute is quite low in grade I (2%), followed by 12%, 26% and 38% students in grades II, III and IV.
- In Odisha, 30% of the students were able to read fluently in 2018. This is lower than the percentage of students reading fluently in the baseline (33%). This decline from the baseline level of competency is evident in grades III and IV. The level of grade I and II is stagnant from the baseline.

Gender and Caste analysis

The following table provides a gender based analysis of students reading fluently.

Gender-cut of students competent in reading with fluency											
	Uttar Pradesh (% of children)				Odisha (% of children)				Overall (% of children)			
	Endline		Baseline		Endline		Baseline		Endline		Baseline	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Grade I	1	2	1	1	8	6	2	6	5	4	2	4
Grade II	15	8	6	2	15	20	17	18	15	14	12	10
Grade III	22	30	13	10	27	47	37	53	25	39	25	32
Grade IV	44	33	22	14	60	58	71	64	52	46	47	39
Average of all grades	21	18	11	7	28	33	32	35	24	26	21	21

Table 64: Gender-wise comparative table for reading fluently as per grade (in %)

- There is no clear trend seen in the performance of boys and girls in the two states.
- Looking at the average scores, one can observe that the performance of boys is marginally better than girls in UP, whereas girls have a marginally better performance than boys in the state of Odisha. This trend is similar to that of the baseline.
- Grade-wise analysis shows, there is fluctuation in the trend in UP, where boys out-perform girls in grades II and IV, wheras girls have exhibited a better performance in grade III. In case of Odisha, girls consistently perform better than boys in all grades except grade I.

The following table provides a caste based analysis of students reading fluently.

		UP				Odisha		
		General	SC	Minority	OBC	SC	ST	OBC
Class I	Endline	8	1	2	1	27	3	14
	Baseline	0	1	1	0	0	4	5
Class 2	Endlin	17	14	17	6	0	14	50

	e							
	Baseline	8	4	5	2	29	13	43
Class 3	Endline	23	28	32	23	22	31	63
	Baseline	11	12	17	9	65	43	23
Class 4	Endline	57	36	42	35	57	53	86
	Baseline	37	13	12	19	82	65	71

Table 65: Caste-wise comparative table for reading fluently as per grade (in %)

- The reading fluency of students in UP, caries according to caste. In the initial grades the performance is low across castes. From grade II onwards, variation across grades start to emerge. The performance in this grade is similar for General and Minority caste respondents, but the performance of OBC is lower. In grade III, the performance of minority students is the best in comparison to other castes. While in grade IV again, the performance of students from general caste is the best.
- In Odisha too, while the performance across caste lines is fluctuating with each grade, the performance of OBC students is significantly better in grade II, III and IV from other grades.

4.7.6 Reading fluently with comprehension

Reading fluently with comprehension refers to students who are able to read at a speed equal to or greater than 40 words per minute and also correctly answer a minimum of two out of five questions based on a passage read by them.

The table below presents the changes in students' ability of reading fluently with comprehension in each grade, since the baseline:

Percentage of students competent in reading fluently with comprehension						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade I	1	0	7	2	4	1
Grade II	12	4	17	13	15	9
Grade III	25	11	35	34	30	23
Grade IV	37	17	41	53	39	35
Average of all grades	19	8	25	25	22	17

Table 66:Grade-wise comparative table for reading fluently with comprehension (in %)

- In general the competency of reading fluently with comprehension is negatively affected by the slow reading speed of students covered in the survey. In other words, a higher percentage of students were able to read with comprehension but due to their slow reading speed, they are not competent in reading fluently with comprehension.
- Similar to the trends in reading fluency. There is a marginal increase in overall percentage of students reading fluently with comprehension since the baseline. There is only a 5 percentage

point increase from 17% in 2015 to 22% in 2018. UP has seen an increase (11%) in this indicator since the baseline, whereas, Odisha has a stagnant trend in 2018.

Gender and Caste analysis
The following table provides a gender based analysis of students reading fluently with comprehension.

Gender-cut of students competent in reading fluently with comprehension												
	Uttar Pradesh (% of children)				Odisha (% of children)				Overall (% of children)			
	Endline		Baseline		Endline		Baseline		Endline		Baseline	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Grade I	1	2	1	1	8	6	2	2	5	4	2	2
Grade II	15	8	6	2	15	20	12	15	15	14	9	9
Grade III	21	29	12	10	25	46	30	39	23	38	21	25
Grade IV	42	33	21	13	36	49	55	49	39	41	38	31
Average of all grades	20	18	10	7	21	30	25	26	20	24	17	16

Table 67: Gender-wise comparative table for reading fluently with comprehension as per grade (in %)

- Similar to the gender analysis of reading fluency, there is a slight variation in the gendered results of the two states.
- In UP endline, the performance of boys is better in grades II and IV, while the performance of girls is better in grade III.
- While in case of Odisha endline, the performance of girls is consistently better than boys across grades II, III and IV.

The following table provides a caste based analysis of students reading fluently with comprehension.

Caste-cut of students competent in reading fluently with comprehension								
		UP				Odisha		
		General	SC	Minority	OBC	SC	ST	OBC
Class I	Endline	8	0	2	1	27	3	14
	Baseline	0	1	1	0	0	2	5
Class 2	Endline	17	14	17	6	0	14	50
	Baseline	8	4	5	2	21	9	36
Class 3	Endline	23	26	31	23	22	30	58
	Baseline	11	12	15	8	55	32	23
Class 4	Endline	57	34	42	35	43	35	71
	Baseline	34	13	11	19	82	48	57

Table 68:Caste-wise comparative table for reading fluency with comprehension (in %)

- The results for students reading fluently with comprehension show a variation across castes.

- Endline results in UP show the performance of students from general caste is similar to the performance of reading fluency where the it is fluctuating with each grade.
- In Odisha endline too, there is a grade-wise variation in the results between different caste groups. The performance of students from OBC is found to be better than other castes in the endline, while the performance of students from SC background was better in the baseline. However, as mentioned earlier, it is important to note that majority of the respondents covered in Odisha belonged to the ST caste category (nearly 76% of the students both in endline as well as baseline).

4.8   Independent Writing

This indicator tests the ability of students to write about a familiar topic. It is tested for students of grade II and above only. The table below presents the percentage of students able to write independently since the baseline:

Percentage of students competent in independent writing						
	Uttar Pradesh (%)		Odisha (%)		Average (%)	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Grade II	21	4	29	22	25	13
Grade III	34	10	50	22	42	16
Grade IV	45	15	53	44	49	30
Average of all grades	33	10	44	29	39	20

Table 69:Grade-wise comparative table for independent writing (in %)

- Competency in independent writing has improved 19 percentage points since the baseline. In 2018, 39% students were competent in independent writing, up from 20% in 2015.
- The competency has increased from 10 % in 2015 to 33% in 2018, Uttar Pradesh. There has been a remarkable increase in this competency across all grades in this state.
- In Odisha, the competency increased from 15 percentage points, from 29% in 2015 to 44% in 2018.

5 Key Findings: Grade-wise

5.1 Grade I

The following table presents percentage of students having key competencies in grade I:

	Uttar Pradesh		Odisha		Average	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Descriptive language (%)	98	25	98	21	98	23
Picture recognition/ Word bank (%)	100	95	100	100	100	98
Phonemic awareness (%)	72	13	78	46	75	30
Letter Identification (%)	62	27	83	83	73	55
Word Identification (%)	19	11	74	63	47	37
Dictation (%)	20	6	61	42	40	24
Listening comprehension (%)	96	40	93	53	94	46
Reading (%)	8	8	26	27	17	18
Expression (%)	6	3	19	4	12	3
Punctuation (%)	5	1	18	14	11	8
Reading comprehension (%)	8	2	44	9	26	5
Reading fluency (more than 40 wpm) (%)	2	0	7	4	5	2
Reading speed (wpm)	29	14	28	26	29	20
Reading fluently with comprehension (%)	1	0	7	2	4	1

Table 70: Key indicator table for grade-I

5.1.1 Reading Context

Descriptive Language
- Overall, 98% of the students are found to be competent in descriptive language. There is a major increase in the percentage points (75%) since the baseline study.
- UP has seen a rise of 73 percentage points, from 25% in 2015 to 98% in 2018.
- Odisha has seen a rise of 77% since the baseline, from 21% in 2015 to 98% in 2018.

Picture recognition
- All the students (100%) were found to be competent in this indicator. There is an increase in 2 percentage points since the baseline which was also close to universal (98%).
- Both UP and Odisha show 100% competency. An increase of 5 percentage points is observed since baseline in UP while Odisha has remained stagnant since baseline.

5.1.2 Phonemic Awareness
- Overall, 75% of the students were found to be competent in phonemic awareness. There is an increase of 15 percentage points in this indicator since the baseline.
- 72% of the students in UP are found to be competent in this indicator. The increase in competency in remarkable, from 13% in 2015 to 72% in 2018.
- In Odisha, 78% of the students were found to be competent in this indicator. There is an increase of 32 percentage points since the baseline.

5.1.3   Phonic Awareness

Letter identification
- Overall, 73% of the students were found to be competent in this indicator. The increase in competency in 18% since the baseline.
- 62% of the students in UP are found to be competent in this indicator. From 27% in 2018 to 62% in 2018, there is an increase of 35 percentage points in the competency level of this indicator.
- The competency in Odisha Is quite high (83%) in this indicator. The competency has been stagnant since the baseline study.

Word Identification
- Overall, 47% of the students are found to be competent in this indicator. There is an increase of 10 percentage points since the baseline.
- Only 19% of the students in UP are found to be competent in word identification. The competency level has been more or less stagnant since the baseline and we can observe an increase of 8% since then.
- The competency level in Odisha is on the higher side in word identification. From 63% in 2015 to 74 % in 2018, there is an increase of 11 percentage points in this indicator since the baseline.

Dictation
- Overall, 40% of the students were found to be competent in dictation. From 24% in 2015 to 41%, the competency level has increased by 16 percentage points.
- Only 20% students in UP were found to be competent in this indicator. The competency level has been low since the baseline (6%) and has increased by 14 percentage points since then.
- The competency level of Odisha is slightly on the higher side. From 42% in 2015 to 61% in 2018, the competency has increased by 19 percentage points in this indicator.

5.1.4   Comprehension

Listening Comprehension
- Overall, 94% of the students were found to be competent in this indicator. There is a remarkable increase of 48 percentage points since the baseline.
- UP exhibits competency level of 96% while and Odisha exhibit a competency level of 93%. UP witnessed an increase of 56 percentage points since baseline while Odisha witnessed an increase of 40 percentage points for the same.

Reading with Comprehension
- Overall, 26% of the students are found to be competent in this indicator in the endline from 5% in the baseline. The competency is quite low but still there is an increase of 21 percentage points since the baseline.
- The competency level of UP is extremely low (8%). This has been stagnant over the years and there is an increase of just 6 percentage points since the baseline.
- Odisha has an increase of 35 percentage points in the competency of students. There is a decent rise from 9% in 2015 to 44% in 2018.

5.1.5   Reading Fluency

Reading

- The reading competency of the students has been stagnant over the years. From 13% in 2015 to 17% in 2018, there is a rise of only 4% in the competency.
- Both UP and Odisha have had a stagnant competency level over the years. UP is stagnant at 8% since 2015 and Odisha has decreased from 27% in 2015 to 26% in 2018.

Expression
- The ability to read with proper expressions was very low among students. From 3% in 2015 to 12% in 2018, the overall competency level has increased by 8 percentage points in this indicator.
- Only 6% of the students were found competent in UP. The percentage has been very low since the baseline study and has increased by 3 percentage points since then.
- Odisha has a low competency as well (19%). We can still see a decent rise of 15 percentage point since the baseline.

Punctuation
- Overall, 11% students were able to use punctuations correctly. The competency has been low since baseline and almost stagnant. An increase of just 3 percentage points can be seen since 2015.
- From 1% in 2015 to 5% in 2018, the competency level in UP had been very low and stagnant in this indicator. An increase of just 4% can be seen since the baseline.
- Odisha has a competency level of 18% which is just 4 percentage points higher than that in the baseline study. The competency level has been stagnant and low for Odisha as well.

Reading Fluency
- Only 5% of the students were able to read more than 40 words per minutes i.e. fluency with competency. This level has been stagnant since the baseline and has seen a rise of just 4 percentage points since 2015.
- In UP, only 2% of the students could read with fluency. In the baseline study the competency was nil and there hasn't been much of an improvement since then.
- In Odisha, only 7% of the students could read with fluency. The competency has been stagnant since the baseline and has seen an increase of just 3% since the baseline study.

Reading Speed
- The average speed of students is 29 words per minute. This was below the benchmark set for competency i.e. 40 words per minute. There is an increase of 9 wpm in the average reading speed of students since the baseline.
- The average speed of reading in UP is 29 wpm. This was below the benchmark set for competency i.e. 40 words per minute. There is an increase of 15 wpm in the average reading speed of students since the baseline.
- The average speed of reading in UP is 28 wpm. This was below the benchmark set for competency i.e. 40 words per minute. The reading speed has been stagnant since the baseline with a minor increase of 2 wpm.

Reading fluently with comprehension
- Only 4% of the students were able to read the comprehension with fluency. This has been stagnant since the baseline and a minor increase of 3 percentage points has taken place since then.
- In UP, the competency of students in this indicator is close to nil (1%). There is no improvements as such since the baseline where the competency level was nil.

- Only 7% of the students in Odisha were found to be competent in this indicator. There is a minor improvement of 5% since the baseline study in 2015.

5.2   Grade II

The following table presents percentage of students having key competencies in grade II:

	Uttar Pradesh		Odisha		Average	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Picture recognition/word bank (%)	99	95	98	98	99	96
Phonemic awareness (%)	87	24	94	63	90	44
Letter Identification (%)	80	51	95	93	88	72
Word Identification (%)	28	19	71	71	49	45
Dictation (%)	28	12	45	41	36	26
Listening comprehension (%)	98	45	87	41	92	43
Reading (%)	26	16	46	52	36	26
Expression (%)	16	9	29	8	22	9
Punctuation (%)	17	7	26	24	22	16
Reading comprehension (%)	25	9	41	23	33	16
Reading fluency (more than 40 wpm) (%)	12	4	17	17	15	7
Reading speed (wpm)	44	29	37	34	41	32
Reading fluently with comprehension (%)	12	4	17	13	15	6
Independent writing (%)	21	9	29	22	25	16

Table 71: Key indicator table for grade-II

5.2.1   Reading Context

Picture recognition
- Overall, nearly all the students (99%) were found to be competent in this indicator. The increase from the baseline is only 3 percentage points since the baseline which was also close to universal (96%).
- Both UP (99%) and Odisha (98%) show extremely high competency. An increase of 4 percentage points is observed since baseline in UP while Odisha remained stagnant.

5.2.2   Phonemic Awareness
- Overall, 90% of the students were found to be competent in phonemic awareness. There is an increase of 58 percentage points in this indicator since the baseline where only 44% of the students were competent in phonemic awareness.
- 87% of the students in UP are found to be competent in this indicator. The increase in competency in remarkable, from 24% in 2015 to 87% in 2018 i.e. 63 percentage points.
- In Odisha, 94% of the students were found to be competent in this indicator. There is an increase of 31 percentage points since the baseline.

5.2.3   Phonic Awareness

Letter identification
- Overall, 88% of the students were found to be competent in this indicator. The increase in competency is of 16 percentage points since the baseline.

- 80% of the students in UP are found to be competent in letter identification in endline, up from 51% in 2015, making an overall increase of 29 percentage points in the competency level of students in letter identification.
- 95% of the students in Odisha were competent in this indicator in 2018, this has increased by only 2 percentage points since baseline, as it was 93% in 2015.

Word Identification
- Overall, 49% of the students are found to be competent in this indicator. There is an increase of 4 percentage points from 45% in the baseline.
- Only 28% of the students in UP are found to be competent in word identification. There is hardly any major change in the competency level since the baseline and we can observe an increase of 16% since then.
- The competency level in Odisha is stagnant since baseline at 71%.

Dictation
- Overall, 36% of the students were found to be competent in dictation. From 26% in 2015 the competency level has increased by 10 percentage points.
- Only 20% students in UP were found to be competent in this indicator. The competency level has ben low since the baseline (6%) and has increased by 14 percentage points since then.
- The competency level of Odisha is slightly on the higher side. From 41% in 2015 to 45% in 2018, the competency has increased by 4 percentage points in this indicator.

5.2.4 Comprehension

Listening Comprehension
- Overall, 92% of the students were found to be competent in listening with comprehension in the endline, in comparison to 43% in the baseline. There is a remarkable increase of 49 percentage points since the baseline.
- Both UP and Odisha exhibit a competency level (98% and 87% respectively). UP witnessed an increase of 53 percentage points since baseline while Odisha witnessed an increase of 46 percentage points for the same.

Reading with Comprehension
- Overall, 33% of the students are found to be competent in this indicator. The competency is quite low but still there is an increase of 21 percentage points since the baseline.
- The competency level of UP is 25%. There is a moderate rise in competency of 16 percentage points since the baseline.
- Odisha has an increase of 18 percentage points in the competency of students. There is a rise from 23% in 2015 to 41% in 2018.

5.2.5 Reading Fluency

Reading
- The reading competency of the students has been on the lower side over the years. From 26% in 2015 to 36% in 2018, there is a rise of 10 percentage points in the competency.
- UP has a competency of 26% in this indicator. There is a rise of 10 percentage points since the baseline.
- Odisha has a competency of 46%. A decrease of 6 percentage points is observed since the baseline study.

Expression
- The ability to read with proper expressions was low among students. From 8% in 2015 to 23% in 2018, the overall competency level has increased by 15 percentage points in this indicator.
- 16% of the students were found competent in UP. The percentage has been very low since the baseline study and has increased by 7 percentage points since then.
- Odisha has a low competency as well (29%). We can still see a descent rise of 21 percentage point since the baseline.

Punctuation
- Overall, 22% students were able to use punctuations correctly. The competency has been low since baseline and almost stagnant. An increase of just 11 percentage points can be seen since 2015.
- From 7% in 2015 to 17% in 2018, the competency level in UP has been low and stagnant in this indicator. An increase of 10%% can be seen since the baseline.
- Odisha has a competency level of 26% which is just 2 percentage points higher than that in the the baseline study. The competency level has been stagnant and low for Odisha as well.

Reading Fluency
- Only 5% of the students were able to read more than 40 words per minutes i.e. fluency with competency. This level has been stagnant since the baseline and has seen a rise of just 4 percentage points since 2015.
- In UP, only 2% of the students could read with fluency. In the baseline study the competency was nil and there hasn't been much of an improvement since then.
- In Odisha, only 7% of the students could read with fluency. The competency has been stagnant since the baseline and has seen an increase of just 3% since the baseline study.

Reading Speed
- The average speed of students is 41 words per minute. This is just above the benchmark set for competency i.e. 40 words per minute. There is an increase of 9 wpm in the average reading speed of students since the baseline.
- The average speed of reading in UP is 44 wpm. This is above the benchmark set for competency i.e. 40 words per minute. There is an increase of 15 wpm in the average reading speed of students since the baseline.
- The average speed of reading in Odisha is 37 wpm. This was below the benchmark set for competency i.e. 40 words per minute. The reading speed has been stagnant since the baseline with a minor increase of 3 wpm.

Reading fluently with comprehension
- 15% of the students were able to read the comprehension with fluency. This has been stagnant since the baseline and a minor increase of 9 percentage points has taken place since then.
- In UP, 12% of the students were found to be competent in this section. There is an increase of 8 percentage points since the baseline study.
- 17% of the students in Odisha were found to be competent in this indicator. There is a minor improvement of 4% since the baseline study in 2015.

5.2.6   Independent Writing

- Overall, 25% of the students were found to be competent in this indicator. There is an increase of 19 percentage points in this indicator since the baseline.
- 34% of the students in UP were found to be competent in this indicator. There is a good increase of 30 percentage points since the baseline.
- 29% of the students in Odisha were found to be competent in this indicator. The competency has been stagnant since the baseline and seen an increase of just 7% since then.

5.3   Grade III

The following table presents percentage of students having key competencies in grade III:

	Uttar Pradesh		Odisha		Average	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Picture recognition/word bank (%)	93	84	86	81	90	83
Phonemic awareness (%)	89	32	91	88	90	60
Letter Identification (%)	90	60	95	98	93	79
Word identification (%)	42	27	81	85	62	56
Dictation (%)	37	16	46	32	41	24
Listening comprehension (%)	93	38	98	68	96	53
Reading (%)	41	29	68	75	55	41
Expression (%)	24	19	50	20	37	20
Punctuation (%)	22	16	44	24	33	20
Reading comprehension (%)	40	15	64	41	52	28
Reading fluency (more than 40 wpm) (%)	26	12	37	44	32	20
Reading speed (wpm)	53	34	49	50	51	42
Reading fluently with comprehension (%)	25	11	35	34	30	17
Independent writing (%)	34	9	50	22	42	16

Table 72: Key indicator table for grade-III

5.3.1   Reading Context

Picture recognition
- Overall, 90% of the students were found to be competent in this indicator. There is an increase of 7 percentage points since the baseline.
- 93% of the students in UP are found to be competent in this indicator. There is an improvement of 9 percentage points since the baseline.
- 86% of the students in Odisha are found to be competent in this indicator. There is an improvement of 5 percentage points since the baseline study.

5.3.2   Phonemic Awareness
- Overall, 90% of the students were found to be competent in phonemic awareness. There is an increase of 60 percentage points in this indicator since the baseline which is quite high.
- 89% of the students in UP are found to be competent in this indicator. The increase in competency in remarkable, from 32% in 2015 to 89% in 2018 i.e. 57 percentage points.
- In Odisha, 91% of the students were found to be competent in this indicator. The competency has been stagnant since the baseline and a decrease of 2 percentage points can be observed.

5.3.3 Phonic Awareness

Letter identification
- Overall, 93% of the students were found to be competent in this indicator. The increase in competency in 14% since the baseline.
- 90% of the students in UP are found to be competent in this indicator. From 60% in 2018 to 90% in 2018, there is an increase of 30 percentage points in the competency level of this indicator.
- The competency in Odisha is quite high (95%) in this indicator. The competency has been stagnant since the baseline and a decrease of 3 percentage points can be observed.

Word Identification
- Overall, 62% of the students are found to be competent in this indicator. There is an increase of 6 percentage points since the baseline.
- 42% of the students in UP are found to be competent in word identification. There is hardly any major change in the competency level since the baseline and we can observe an increase of 15% since then.
- The competency level in Odisha is on the higher side in word identification. From 85% in 2015 to 81 % in 2018, the competency level has remained stagnant and a minor decrease of 4 percentage points can be observed.

Dictation
- Overall, 41% of the students were found to be competent in dictation. From 24% in 2015 to 41%, the competency level has increased by 17 percentage points.
- 37% students in UP were found to be competent in this indicator. The competency level has increased by 21 percentage points since the baseline study.
- From 32% in 2015 to 46% in 2018, the competency has increased by 14 percentage points in this indicator for Odisha.

5.3.4 Comprehension

Listening Comprehension
- Overall, 96% of the students were found to be competent in this indicator. There is a remarkable increase of 43 percentage points since the baseline.
- Both UP and Odisha exhibit a competency level (93% and 98% respectively). UP witnessed an increase of 55 percentage points since baseline while Odisha witnessed an increase of 30 percentage points for the same.

Reading with Comprehension
- Overall, 52% of the students are found to be competent in this indicator. There is an increase of 24 percentage points since the baseline study.
- The competency level of UP is 40%. There is a moderate rise in competency of 25 percentage points since the baseline.
- Odisha has an increase of 23 percentage points in the competency of students. There is a rise from 41% in 2015 to 64% in 2018.

5.3.5 Reading Fluency

Reading
- The reading competency of the students has been almost stagnant over the years. From 41% in 2015 to 55% in 2018, there is a rise of 14 percentage points in the competency.

- UP has a competency of 41% in this indicator. There is a rise of 12 percentage points since the baseline.
- Odisha has a competency of 68%. A decrease of 7 percentage points is observed since the baseline study.

Expression
- From 20% in 2015 to 37% in 2018, the overall competency level has increased by 17 percentage points in this indicator.
- 24% of the students were found competent in UP. The percentage has been very low since the baseline study and has increased by 5 percentage points since then.
- Odisha has an average competency (50%). We can still see a good rise of 30 percentage point since the baseline.

Punctuation
- Overall, 33% students were able to use punctuations correctly. An increase of just 13 percentage points can be seen since 2015.
- From 16% in 2015 to 22% in 2018, the competency level in UP has been low and stagnant in this indicator. An increase of 6% can be seen since the baseline.
- Odisha has a competency level of 44%. There is a rise of 20 percentage points since the baseline study.

Reading Fluency
- 32% of the students were able to read more than 40 words per minutes in the endline. This has improved by 12 percentage points since the baseline.
- 26% of the students in UP are found to be competent in this indicator. There is an increase of 14 percentage points in this indicator since the baseline.
- In Odisha, 37% of the students could read with fluency. There is a minor decrease of 7 percentage points since the baseline.

Reading Speed
- The average speed of students is 51 words per minute. This is above the benchmark set for competency i.e. 40 words per minute. There is an increase of 9 wpm in the average reading speed of students since the baseline.
- The average speed of reading in UP is 53 wpm. This is above the benchmark set for competency i.e. 40 words per minute. There is an increase of 34 wpm in the average reading speed of students since the baseline.
- The average speed of reading in Odisha is 49 wpm. This was below the benchmark set for competency i.e. 40 words per minute. The reading speed has been stagnant since the baseline with a minor decrease of 1 wpm.

Reading fluently with comprehension
- 30% of the students were able to read the comprehension with fluency. There is an increase of 13 percentage points since the baseline study.
- In UP, 25% of the students were found to be competent in this section. There is an increase of 14 percentage points since the baseline study.
- 35% of the students in Odisha were found to be competent in this indicator. The competency has been stagnant since the baseline with a minor improvement of 1% since then.

5.3.6 Independent Writing

- Overall, 42% of the students were found to be competent in this indicator. There is a good increase of 16 percentage points in this indicator since the baseline.
- 34% of the students in UP were found to be competent in this indicator. There is a good increase of 25 percentage points since the baseline.
- 50% of the students in Odisha were found to be competent in this indicator. There is a good improvement of 28% in this indicator since the baseline study.

5.4   Grade IV

The following table presents percentage of students having key competencies in grade IV:

	Uttar Pradesh		Odisha		Average	
	Endline	Baseline	Endline	Baseline	Endline	Baseline
Picture recognition/ word bank (%)	94	91	90	90	92	91
Phonemic awareness (%)	95	40	94	76	94	58
Letter identification (%)	93	79	94	98	93	89
Word Identification (%)	55	38	83	88	69	63
Dictation (%)	50	28	48	53	49	41
Listening comprehension (%)	93	32	91	66	92	49
Reading (%)	57	43	74	87	66	55
Expression (%)	38	25	59	25	49	25
Punctuation (%)	35	22	59	36	47	29
Reading comprehension (%)	59	27	50	45	54	36
Reading fluency (more than 40 wpm) (%)	38	17	59	68	49	31
Reading speed (wpm)	58	39	59	62	59	49
Reading fluently with comprehension (%)	37	17	41	53	39	27
Independent writing (%)	45	16	53	44	49	30

Table 73: Key indicator table for grade-IV

5.4.1   Reading Context

Picture recognition
- Overall, 92% of the students were found to be competent in this indicator. There is an increase of 1 percentage points since the baseline.
- 94% of the students in UP are found to be competent in this indicator. There is an improvement of 3 percentage points since the baseline.
- 90% of the students in Odisha are found to be competent in this indicator. The competency has been stagnant since the baseline study.

5.4.2   Phonemic Awareness
- Overall, 94% of the students were found to be competent in phonemic awareness. There is an increase of 36 percentage points in this indicator since the baseline which is quite high.
- 95% of the students in UP are found to be competent in this indicator. The increase in competency in remarkable, from 40% in 2015 to 95% in 2018 i.e. 55 percentage points.
- In Odisha, 94% of the students were found to be competent in this indicator. There is an improvement of 18 percentage points in this indicator since the baseline study.

5.4.3   Phonic Awareness

Letter identification
- Overall, 93% of the students were found to be competent in this indicator. The increase in competency in 4% since the baseline.
- 93% of the students in UP are found to be competent in this indicator. From 79% in 2018 to 93% in 2018, there is an increase of 14 percentage points in the competency level of this indicator.
- The competency in Odisha Is quite high (94%) in this indicator. The competency has been stagnant since the baseline and a decrease of 4 percentage points can be observed.

Word Identification
- Overall, 69% of the students are found to be competent in this indicator. There is an increase of 6 percentage points since the baseline.
- 55% of the students in UP are found to be competent in word identification. There is hardly any major change in the competency level since the baseline and we can observe an increase of 17% since then.
- The competency level in Odisha is on the higher side in word identification. From 88% in 2015 to 83 % in 2018, the competency level has remained stagnant and a minor decrease of 5 percentage points can be observed.

Dictation
- Overall, 49% of the students were found to be competent in dictation. From 41% in 2015 to 49%, the competency level has increased by 8 percentage points.
- 50% students in UP were found to be competent in this indicator. The competency level has increased by 22 percentage points since the baseline study.
- From 48% in 2015 to 53% in 2018, the competency has been stagnant and seen a rise of just 5% since the baseline study in Odisha.

5.4.4   Comprehension

Listening Comprehension
- Overall, 92% of the students were found to be competent in this indicator. There is a remarkable increase of 43 percentage points since the baseline.
- Both UP and Odisha exhibit a competency level (93% and 91% respectively). UP witnessed an increase of 61 percentage points since baseline while Odisha witnessed an increase of 25 percentage points for the same.

Reading with Comprehension
- Overall, 54% of the students are found to be competent in this indicator. There is an increase of 18 percentage points since the baseline study.
- The competency level of UP is 59%. There is a moderate rise in competency of 32 percentage points since the baseline.
- Odisha has a competency level of 50% in this indicator. The competency has been stagnant with a minor increase of 5% since the baseline.

5.4.5   Reading Fluency

Reading
- The reading competency of the students has been almost stagnant over the years. From 55% in 2015 to 66% in 2018, there is a rise of 11 percentage points in the competency.

- UP has a competency of 57% in this indicator. There is a rise of 14 percentage points since the baseline.
- Odisha has a decreasing competency since the baseline with a decrease of 13% from 87% in 2015 to 74% in 2018.

Expression
- From 25% in 2015 to 49% in 2018, the overall competency level has increased by 24 percentage points in this indicator.
- 38% of the students were found competent in UP. There is an increase of 13 percentage points since the baseline study.
- Odisha has an average competency (59%). We can still see a good rise of 34 percentage point since the baseline.

Punctuation
- Overall, 47% students were able to use punctuations correctly. An increase of just 18 percentage points can be seen since 2015.
- From 22% in 2015 to 35% in 2018, there is an increase of 13% since the baseline study in UP.
- Odisha has a competency level of 59%. There is a rise of 23 percentage points since the baseline study.

Reading Fluency
- 49% of the students were found to be competent in this indicator. There is an increase of 18 percentage points in this indicator since the baseline study.
- 38% of the students in UP are found to be competent in this indicator. There is an increase of 21 percentage points in this indicator since the baseline.
- In Odisha, 59% of the students could read with fluency. There is a minor decrease of 9 percentage points since the baseline.

Reading Speed
- The average speed of students is 59 words per minute. This is above the benchmark set for competency i.e. 40 words per minute. There is an increase of 10 wpm in the average reading speed of students since the baseline.
- The average speed of reading in UP is 58 wpm. This is above the benchmark set for competency i.e. 40 words per minute. There is an increase of 19 wpm in the average reading speed of students since the baseline.
- The average speed of reading in Odisha is 59 wpm. This was below the benchmark set for competency i.e. 40 words per minute. The reading speed has been stagnant since the baseline with a minor decrease of 3 wpm.

Reading fluently with comprehension
- 39% of the students were able to read the comprehension with fluency. There is an increase of 12 percentage points since the baseline study.
- In UP, 37% of the students were found to be competent in this section. There is an increase of 20 percentage points since the baseline study.
- 41% of the students in Odisha were found to be competent in this indicator. There is a decrease of 12% competency in this indicator.

5.4.6   Independent Writing

- Overall, 49% of the students were found to be competent in this indicator. There is an increase of 19 percentage points in this indicator since the baseline.
- 45% of the students in UP were found to be competent in this indicator. There is a good increase of 29 percentage points since the baseline.
- 53% of the students in Odisha were found to be competent in this indicator. There is an improvement of 9% in this indicator since the baseline study.

Interviews were conducted with the state, district and block level officials to understand the system level impact left by the CARE program

Strengthening leadership and concepts of EGR of NPRCs

CARE has adopted a teacher development model in select clusters in the program where CARE's staff plays a supportive role to the Cluster Resource Centre Coordinator (CRCC) in facilitating the monthly cluster meetings at state allotted CRC centres. The focus of these meetings is to improve the knowledge and skills of teachers on early grade reading while also sensitizing them towards concepts of gender equity and safety and security in education. This support has resulted in an improvement in leadership skills exhibited by the NPRCs which is appreciated by the block and district administration. It is felt by the administration that the monthly training given by the NPRC is far more effective than the occasional block level trainings conducted for the teachers. This is a change from their original responsibilities as NPRC, while earlier, their duties were restricted to administrative coordination between the block and school level, after the trainings atteneded at the state level and continuous support of the CARE team, they have become well trained in the concepts of EGR as well.

The perception of NPRCs regarding the CARE intervention is however, different in both states. While the NPRCs in both states acknowledge their personal and professional growth due to the program. In UP, where the position of NPRC is given as an additional duty to a head master of a UPS, there is a common perception that the CARE intervention has added to the existing workload of the NPRC, which was to provide support in administrative tasks. Whereas in Odisha, where the NPRC post is a separate post, the CARE staff is perceived to share the effort.

Teacher development for improving their knowledge on EGR and attitudinal changes towards gender equity, safety and security in education

A teacher from each school in the cluster is required to attend the monthly CRC meetings. Further, the NPRC and CARE team also provide on site-support to the teachers in each cluster by visiting their schools and conducting classroom demonstrations to help implement activity based learning techniques for EGR. The block administration see the meetings as a space that motivates and energizes the teachers.

"The CRC meetings help energize teachers."- BEO, Budhipur

Improving quality of education, specifically early grade reading

The CARE intervention is seen to be improving the quality of education in the select project schools. The materials provided by CARE to create a print rich environment in school is recognized by most government officials as the one of the most effective aspects of the CARE intervention. Further, the morning assembly, also known as bal sabha, is found to have a positive impact on students' confidence and participation in the schools. In Budhipur, the block level official mentioned the increase in attendance of students, and the use of TLMs provided by CARE team to engage students in the event of teacher vacancy or absenteeism.

Supportive role to local administration in community level mobilization programs

The CARE team is appreciated by the district and block level teams (Shrawasti and Baharaich) for making themselves available and participating in all education related events happening at the block or district level. This includes enrolment drives such as school chalo abhiyan, beti bachao beti padhao etc. At such

events, the CARE district level staff often give speeches with an attempt of improving the level of awareness of among the community on importance of education and girls education.

Despite appreciation at the district and block level in both UP and Odisha, the officials were found to have limited understanding about the theoretical aspects of EGR, or to have close understanding of the different kinds of cluster level support and changes undertaken by the programme. However, the officials were enthusiastic about the initiative in a vague sense, mainly due to the resource support provided by the CARE team (physical and human resource support). Having the ALCCs as well as the district coordinators (of CARE India) have helped ease the workload of the government officials, and all of them were appreciative of the book and TLM support provided at the schools. The officials also found value in having resource persons and subject-matter specialists from CARE (ALCCs, DTAs or district coordinators) skilled in training and community mobilization to facilitate and support teacher-training and community outreach activities.

But the research team found the block and district officials lacking understanding on the concept of a *cluster resource centre* and the need for academic support and sharing for teachers. They are, as evident above, able to value the need for subject-matter input and insights of the CARE team, to substantiate training and outreach activities.

At state

CARE has played an integral role supporting the state education department in UP since 2011 and has made *a distinct impact for EGR at the state level*. Aspects of the CARE intervention that are being approved for upscaling at the state level, albiet in a phased manner are as follows:

1. CARE has played a pivotal role in development of the SCERT training module for in-service training of teachers in UP on the topic of Early grade Reading (including numeracy and hindi language). This module has already been used to train 20 state resource persons and 300 master trainers spread across 75 districts in the state and have completed their training on this. The master trainers will be conducting trainings for NPRCs and BRPs in each block who will be subsequently holding trainings of all primary school teachers.
2. The **assessment register** used by CARE in the select program districts, is being upscaled for use for all primary schools in the state.
3. There is a planning chart which will be prepared by teachers across all schools for teachers to maintain lesson plans, syllabus, time table and attendance.
4. In UP, the government has allotted funding from the Padhe Bharat Badhe Bharat program to CARE to supply its reading resources and print rich material to 9000 schools. The funding will be increased in a phased manner, to increase the coverage to remaining schools in subsequent years.
5. The state has also issued a directive to hold **60 minute language classes** in all primary schools in UP and 90 minute language classes in Odisha.
6. Other activities including a 40 minute **morning assembly** to be held in all primary schools in the state in the next 4-5 years, it will be scaled up to all over state.- including activities that include expression
7. The state department in UP also appreciates the CARE pilot of Teacher Resource Lab (TRL) for inculcating a spirit of scientific thinking among students. They have also approved the upscaling of the TRL to be expanded to one TRL for each district.

SMCs considering EGR as an important priority

The understanding of the concept of EGR varied across the districts. In select FGDs in districts of UP, the SMC members disclosed that EGR was discussed in nearly all SMC meetings. Here, teachers discussed the importance of reading and use of activities and games to improve the learning outcome of students. Despite having an understanding of the concept, none of the SMCs revealed taking any action towards improving early grade reading. One of the SMC members pointed out that working on early grade reading is a job of the teachers and not the SMC.

Majority of the other SMC members however, did not have an understanding of the concept of early grade reading (EGR) and took it to be synonymous with studies in general. With respect to action taken to improve EGR in schools, they mentioned efforts made towards improving the overall education and enrolment of students in school.

SMC members' opinion on equal opportunities for boys and girls for early grade reading

Similar to the findings in the baseline, all SMC members across both states, expressed that girls and boys should be given equal opportunity for an education. SMC members were aware that getting an education is a right of all children in the country and resonated with the thought that education should be a priority for all children including- boys and girls. In order to have a bright future, both boys and girls need to have a good education.

They openly expressed that girls' education should be given the same importance and attention by parents as boys'. Equal opportunities of education will result in girls performing at par with boys, getting access to better jobs opportunities and overall development of the village. While they discussed popular sayings like education of girls benefits not just one but two families, they also revealed that gender differentiation in education is still prevalent among families in both states. Parents sometimes do not prioritize the education of girls as they are less likely than boys to hold jobs, however, none of the SMC members expressed having confidence in their position to bring about a change in this regard. They expressed that counselling of parents through house visits is the maximum they can do in similar cases.

SMCs views on gender based violence and safety and security of girls
Most of the SMCs in UP and Odisha denied that gender based violence is an issue in their regions and has any impact on girls education in their villages. The participants expressed that there has been an improvement in the law and order and even teachers in schools are dedicated to ensuring a safe environment for girls education. However, in two out of six discussions in UP, the SMC members acknowledged that GBV and safety of girls is one of the biggest reasons deterring females to complete their education. In district Balrampur, the SMC members shared that though the incidences of violence have reduced in recent years, but they still do occur and have an impact on the psyche of the parents. In Bahraich as well, the members agreed that while there has not been any incident in the recent past, safety and security of girls is an important factor that plays a role in detering girls education.

SMCs initiating actions at community levels to address reading challenges (promotion of library, reading club, reading room, etc.)

The most common problem faced in EGR is that guardians often lack awareness. Due to low income of many of the families and low level of education of the parents themselves, they do neglect the education of students and are unable to provide a conducive home environment for learning. The initiatives taken by the SMCs to counter reading challenges in their jurisdiction were school enrolment rallies with special focus on girls education, home visits for counseling of parents in case of drop-out or regular absenteeism of students against gender differentiation in education and importance of education for the future of both boys and girls.

8   ANNEXURE:

1.1   Teachers observation and self-administered responses

The purpose of reading instruction is to teach children to recognize words and to pronounce them correctly

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	Uttar Pradesh	1	0	0	52	47
	Odisha	15	8	0	31	46
	Total	5	2	0	47	47
Baseline	UP	1	3	0	45	50
	Odisha	7	16	3	45	29
	Total	3	6	1	45	44

Table 74: Self-administered teachers' questionnaire table 1

When students read text, I ask them questions such as-What does it mean?

		Never	Rarely	Sometimes	Most of the time	Always
2018	Uttar Pradesh	0	4	14	37	46
	Odisha	12	23	31	15	19
	Total	3	8	18	32	39
Baseline	UP	1	6	15	26	47
	Odisha	19	26	45	3	7
	Total	6	12	24	19	36

Table 75: Self-administered teachers' questionnaire table 2

Reading and writing are unrelated processes

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	Uttar Pradesh	26	63	1	5	5
	Odisha	50	31	0	8	12
	Total	32	55	1	6	7
Baseline	UP	21	51	0	18	8
	Odisha	48	36	0	10	7
	Total	28	47	0	16	7

Table 76: Self-administered teachers' questionnaire table 3

When planning instruction, I take into account the needs of children by including activities that meet their social, emotional, physical, and affective needs

		Never	Rarely	Sometimes	Most of the time	Always
2018	Uttar Pradesh	1	0	5	38	56
	Odisha	77	19	4	0	0
	Total	20	5	5	29	42
Baseline	UP	0	0	6	54	40
	Odisha	68	32	0	0	0
	Total	19	9	5	39	28

Table 77: Self-administered teachers' questionnaire table 4

Students should be treated as individual learners rather than as a group						
		Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
2018	**Uttar Pradesh**	1	12	0	62	25
	Odisha	12	27	0	42	19
	Total	4	16	0	57	23
Baseline	**UP**	1	15	0	51	26
	Odisha	19	29	0	29	23
	Total	6	19	0	45	25

Table 78:Self-administered teachers' questionnaire table 5

I schedule time every day for self-selected reading and writing experiences						
		Never	**Rarely**	**Sometimes**	**Most of the time**	**Always**
2018	**Uttar Pradesh**	3	3	21	22	52
	Odisha	50	42	4	0	4
	Total	14	12	17	17	40
Baseline	**UP**	1	3	17	28	51
	Odisha	65	29	7	0	0
	Total	19	10	14	20	37

Table 79:Self-administered teachers' questionnaire table 6

Students should use (approximation strategies) during reading						
		Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
2018	**Uttar Pradesh**	1	5	1	69	24
	Odisha	4	0	4	54	39
	Total	2	4	2	65	27
Baseline	**UP**	3	14	12	50	18
	Odisha	0	3	3	55	39
	Total	2	11	9	51	24

Table 80:Self-administered teachers' questionnaire table 7

Teachers should read aloud to students on a daily basis						
		Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
2018	**Uttar Pradesh**	0	20	6	51	24
	Odisha	19	8	0	42	31
	Total	5	17	5	49	25
Baseline	**UP**	4	15	4	50	26
	Odisha	3	7	0	39	52
	Total	4	13	3	47	33

Table 81: Self-administered teachers' questionnaire table 8

I encourage my students to monitor their comprehension as they read						
		Never	**Rarely**	**Sometimes**	**Most of the time**	**Always**
2018	**Uttar Pradesh**	0	0	3	30	68
	Odisha	62	31	8	0	0
	Total	15	8	4	22	51
Baseline	**UP**	1	0	5	33	59

Odisha	68	26	7	0		0
Total	20	7	6	24		42

Table 82: Self-administered teachers' questionnaire table 9

I use a variety of pre-reading strategies with my students						
		Never	Rarely	Sometimes	Most of the time	Always
2018	**Uttar Pradesh**	0	3	9	36	53
	Odisha	50	35	12	0	0
	Total	12	10	9	27	40
Baseline	**UP**	0	0	15	40	40
	Odisha	39	32	29	0	0
	Total	11	9	19	28	28

Table 83: Self-administered teachers' questionnaire table 10

It is not necessary for students to write text on a daily basis						
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	**Uttar Pradesh**	11	49	4	31	5
	Odisha	42	35	0	12	12
	Total	19	46	3	26	7
Baseline	**UP**	14	55	1	24	5
	Odisha	58	32	0	7	3
	Total	27	49	1	19	5

Table 84: Self-administered teachers' questionnaire table 11

Students should be encouraged to sound out all known and unknown words						
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	**Uttar Pradesh**	1	11	0	62	26
	Odisha	15	4	0	15	65
	Total	5	9	0	51	36
Baseline	**UP**	3	10	0	56	31
	Odisha	13	0	0	16	71
	Total	6	7	0	45	42

Table 85: Self-administered teachers' questionnaire table 12

The purpose of reading is to understand print						
		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	**Uttar Pradesh**	5	43	1	41	10
	Odisha	4	19	8	31	39
	Total	5	37	3	38	17
Baseline	**UP**	3	24	6	42	22
	Odisha	23	26	3	26	23
	Total	8	25	6	38	22

Table 86: Self-administered teachers' questionnaire table 13

It is important to keep informed the parents on students progress						
		Never	Rarely	Sometimes	Most of the time	Always
2018	**Uttar Pradesh**	0	0	9	31	61

	Odisha	77	15	0	4	4
	Total	19	4	7	24	47
Baseline	**UP**	0	1	9	33	56
	Odisha	68	26	7	0	0
	Total	19	8	8	24	40

Table 87: Self-administered teachers' questionnaire table 14

I organize my classroom so that my students have an opportunity to write in at least one subject every day

		Never	Rarely	Sometimes	Most of the time	Always
2018	**Uttar Pradesh**	1	0	5	40	54
	Odisha	27	23	35	4	12
	Total	8	6	12	31	44
Baseline	**UP**	0	4	10	39	46
	Odisha	36	26	32	0	7
	Total	10	10	17	28	35

Table 88:Self-administered teachers' questionnaire table 15

I ask the parents of my students to share their time, knowledge, and expertise in my classroom

		Never	Rarely	Sometimes	Most of the time	Always
2018	**Uttar Pradesh**	5	6	36	14	40
	Odisha	39	15	23	4	19
	Total	13	8	33	11	35
Baseline	**UP**	12	3	27	22	37
	Odisha	13	32	36	10	10
	Total	12	11	29	18	29

Table 89: Self-administered teachers' questionnaire table 16

Students in my classroom generally are encouraged to scribble, draw as part of pre writing activities

		Never	Rarely	Sometimes	Most of the time	Always
2018	**Uttar Pradesh**	1	0	6	28	64
	Odisha	39	42	12	4	4
	Total	10	10	8	22	50
Baseline	**UP**	0	1	10	36	53
	Odisha	58	23	19	0	0
	Total	17	7	13	26	38

Table 90:Self-administered teachers' questionnaire table 17

In my class, I organize experiences on reading, writing, speaking, and listening simultaneously

		Never	Rarely	Sometimes	Most of the time	Always
2018	**Uttar Pradesh**	1	5	6	31	54
	Odisha	19	27	50	0	4
	Total	6	10	17	23	42
Baseline	**UP**	8	0	15	30	47
	Odisha	36	26	16	0	23
	Total	16	7	16	21	40

Table 91: Self-administered teachers' questionnaire table 18

Reading instruction should always be delivered to the whole class at the same time		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	Uttar Pradesh	3	25	5	54	12
	Odisha	27	39	4	19	12
	Total	8	28	5	46	12
Baseline	UP	6	24	6	40	23
	Odisha	16	55	0	16	13
	Total	9	33	5	33	20

Table 92:Self-administered teachers' questionnaire table 19

I teach from different sources of reading other than textbook		Never	Rarely	Sometimes	Most of the time	Always
2018	Uttar Pradesh	1	0	33	30	36
	Odisha	62	23	12	0	4
	Total	16	6	28	22	28
Baseline	UP	3	3	50	31	12
	Odisha	45	42	10	3	0
	Total	15	14	39	23	8

Table 93: Self-administered teachers' questionnaire table 20

Grouping for reading instruction should have children having different ability together		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	Uttar Pradesh	4	30	3	48	10
	Odisha	8	12	0	35	46
	Total	5	25	2	45	19
Baseline	UP	13	41	5	32	8
	Odisha	7	10	0	36	48
	Total	11	32	4	33	19

Table 94:Self-administered teachers' questionnaire table 21

I can teach language when I teach other subjects like Math		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	Uttar Pradesh	1	19	3	61	14
	Odisha	19	12	4	31	35
	Total	6	17	3	53	19
Baseline	UP	5	28	3	51	13
	Odisha	3	13	3	52	29
	Total	5	24	3	51	17

Table 95: Self-administered teachers' questionnaire table 22

I use a variety of grouping patterns to teach reading such as skill groups, interest groups, whole groups, and individual instruction		Never	Rarely	Sometimes	Most of the time	Always
2018	Uttar Pradesh	3	1	31	21	38
	Odisha	31	27	23	0	19
	Total	9	8	29	16	34

Baseline	UP	1	4	26	41	28
	Odisha	32	23	39	0	7
	Total	10	9	29	29	22

Table 96: Self-administered teachers' questionnaire table 23

Students need to write for a variety of purposes

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	Uttar Pradesh	0	8.6	0	67.9	18.5
	Odisha	3.8	15.4	0	42.3	38.5
	Total	0.9	10.3	0	61.7	23.4
Baseline	UP	0	2.6	7.7	71.8	17.9
	Odisha	9.7	3.2	0	51.6	35.5
	Total	2.8	2.8	5.5	66.1	22.9

Table 97: Self-administered teachers' questionnaire table 24

I feel the need to update my knowledge on language and language instruction through teacher development forums

		Never	Rarely	Sometimes	Most of the time	Always
2018	Uttar Pradesh	1	1	7	43	38
	Odisha	65	27	4	0	0
	Total	17	8	7	33	29
Baseline	UP	1	3	21	44	32
	Odisha	58	29	13	0	0
	Total	17	10	18	31	23

Table 98: Self-administered teachers' questionnaire table 25

I feel strong oral development helps children in reading

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	Uttar Pradesh	0	3	1	53	37
	Odisha	12	0	0	35	50
	Total	3	2	1	49	40
Baseline	UP	1	3	0	59	37
	Odisha	3	3	0	39	55
	Total	2	3	0	53	42

Table 99:Self-administered teachers' questionnaire table 26

The major purpose of reading assessment is to understand whether children have mastered the varna mala

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2018	Uttar Pradesh	5	11	1	58	21
	Odisha	23	12	4	35	27
	Total	9	11	2	52	22
Baseline	UP	0	8	0	63	30
	Odisha	7	10	0	48	36
	Total	2	8	0	59	31

Table 100: Self-administered teachers' questionnaire table 27

I assess my students' reading progress by creating text from children's own experiences

		Never	Rarely	Sometimes	Most of the time	Always
2018	**Uttar Pradesh**	0	0	19	31	44
	Odisha	42	31	19	8	0
	Total	10	8	19	25	34
Baseline	**UP**	0	0	17	35	49
	Odisha	23	36	36	0	7
	Total	6	10	22	25	37

Table 101: Self-administered teachers' questionnaire table 28

Parental reading habits in the home affect their children's attitudes toward reading						
		Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
2018	**Uttar Pradesh**	0	5	4	49	38
	Odisha	12	0	4	35	46
	Total	3	4	4	46	40
Baseline	**UP**	0	6	0	50	44
	Odisha	0	0	0	61	39
	Total	0	5	0	53	42

Table 102: Self-administered teachers' questionnaire table 29

At the end of the day, I reflect on the effectiveness of my instructional decisions						
		Never	Rarely	Sometimes	Most of the time	Always
2018	Uttar Pradesh	0	1	19	30	41
	Odisha	65	15	15	0	0
	Total	16	5	18	22	31
Baseline	UP	1	4	14	35	46
	Odisha	81	13	3	3	0
	Total	24	6	11	26	33

Table 103: Self-administered teachers' questionnaire table 30

8.2   % of Children having Reading Skills: Comparative Table

Competencies	Indicator	Question No.	Year	UP Grade 1	UP Grade 2	UP Grade 3	UP Grade 4	Odisha Grade 1	Odisha Grade 2	Odisha Grade 3	Odisha Grade 4	Total Grade 1	Total Grade 2	Total Grade 3	Total Grade 4
Reading context	Descriptive Language	2	2018	98				98				98			
		2	2017	98	-	-	-	100	-	-	-	99	-	-	-
		2	2016	76	-	-	-	45	-	-	-	61	-	-	-
		2	2015	25	-	-	-	21	-	-	-	23	-	-	-
	Picture recognition/ Word Bank	4	2018	100	99	93	94	100	98	86	90	100	99	90	92
		4	2017	100	100	97	98	100	100	98	97	100	100	97	98
		4	2016	99	97	96	94	100	100	84	78	100	99	90	86
		4	2015	95	95	84	91	100	98	81	90	98	96	83	91
Phonemic	Sound Identification	7	2018	72	87	89	95	78	94	91	94	75	90	90	94
		7	2017	75	86	92	94	78	93	92	98	77	89	92	96
		7.1	2016	44	56	71	72	55	87	92	91	50	72	82	82
		7.1	2015	13	24	32	40	46	63	88	76	30	44	60	58
Phonic	Alphabet recognition	5	2018	62	80	90	93	83	95	95	94	73	88	93	93
		5	2017	65	80	86	90	80	94	94	97	73	87	90	94
		5	2016	45	64	75	86	81	88	96	97	63	76	86	92
		5	2015	27	51	60	79	83	93	98	98	55	72	79	89
	Vocabulary (Word Identification)	6	2018	19	28	42	55	74	71	81	83	47	49	62	69
		6	2017	25	39	50	55	65	76	63	81	45	58	56	68
		6	2016	21	24	44	47	63	70	73	88	42	47	59	68
		6	2015	11	19	27	38	63	71	85	88	37	45	56	63
	Dictation	8	2018	20	28	37	50	61	45	46	48	40	36	41	49
		8	2017	21	38	41	48	52	49	30	43	37	43	36	46
		8	2016	18	17	35	40	49	34	26	44	34	26	31	42

Category	Sub-category	Indicator	Year												
		8	2015	6	12	16	28	42	41	32	53	24	26	24	41
Comprehension	Listening comprehension	3	**2018**	**96**	**98**	**93**	**93**	**93**	**87**	**98**	**91**	**94**	**92**	**96**	**92**
		3	2017	96	96	89	84	89	92	96	97	93	94	93	90
		3.1-3.5	2016	74	76	70	60	63	47	75	69	69	61	73	65
		3.1-3.5	2015	40	45	38	32	53	41	68	66	46	43	53	49
	Reading Comprehension	9.3	**2018**	**8**	**25**	**40**	**59**	**44**	**41**	**64**	**50**	**26**	**33**	**52**	**54**
		9.3	2017	13	32	48	58	36	54	41	65	25	43	45	62
		9.3.1-9.3.5	2016	6	12	27	36	15	25	41	48	10	18	34	42
		9.3.1-9.3.5	2015	2	9	15	27	9	23	41	45	5	16	28	36
Reading fluency	Tone and gesture	9.2.1	**2018**	**6**	**16**	**24**	**38**	**19**	**29**	**50**	**59**	**12**	**22**	**37**	**49**
		9.2.1	2017	6	21	35	45	13	30	34	47	9	26	34	46
		9.2.1	2016	2	12	22	31	9	12	31	31	6	12	27	31
		9.2.1	2015	3	9	19	25	4	8	20	25	3	9	20	25
	Punctuation	9.2.2	**2018**	**5**	**17**	**22**	**35**	**18**	**26**	**44**	**59**	**11**	**22**	**33**	**47**
		9.2.2	2017	6	19	31	34	13	35	37	49	10	27	34	42
		9.2.2	2016	4	10	19	25	9	21	36	38	7	16	28	32
		9.2.2	2015	1	7	16	22	14	24	24	36	8	16	20	29
Independent Writing		9	**2018**		**21**	**34**	**45**		**29**	**50**	**53**		**25**	**42**	**49**
		9	2017	-	22	39	46	-	35	41	53	-	28	40	50
		9	2016	-	9	17	25	-	20	19	55	-	15	18	40
		9	2015	-	9	9	16	-	22	22	44	-	16	16	30

*Each percentage is the sum of high and medium as represented in the competency matrix previously.

Table 104: Percentage of students against each indicator for all the grades

8.3 Scoring

There is a total 10 competencies in 2018. Those who have been scored A or B are considered to be competent while those who have scored C, D or E are considered to be not competent yet. Therefore the former is denoted by 1 and latter by 0. A sum of 0's and 1's gives us the competency level for each child. This has further been converted into percentage and then averaged for each grade.

Q. No.		Domain	CODE	Scores	
Grade I	Grades II, III, IV			Grade I	Grades II, III, IV
2	-	Descriptive Language			NA
		NR: No Response	D	0	NA
		Level A: Child can talk about only 1 picture in the sequence in a complete sentence	C	0	NA
		Level B: Child can talk about 2 pictures in the sequence in complete sentences	B	1	NA
		Level C: Child can talk about all the pictures in the sequence in complete sentences	A		NA
3	2	**Listening Comprehension**			
		NR: No Response or answers all questions incorrectly	D	0	0
		Level A: Answers 1 question correctly	C	0	0
		Level B: Answers 2-3 questions correctly sentence	B	1	1
		Level C: Answers 4-5 questions correctly	A		
4	3	**Vocabulary/Word Identification**			
		NR: No Response	D	0	0
		Level A: Child can identify correctly only 1-2 pictures	C	0	0
		Level B: Child can identify correctly only 3-4 pictures	B	1	1
		Level C: Child can identify correctly 5-6 pictures	A		
5	4	**Letter Identification**			
		NR: No Response	D	0	0
		Level A: Child can identify correctly less than 8 letters	C	0	0
		Level B: Child can identify correctly 9-20 letters	B	1	1
		Level C: Child can identify correctly 21 or more letters	A		
6	5	**Word Identification**			
		NR: No Response	E	0	0
		Level A: Child can identify correctly less than 2 words	C+D	0	0

		Level B: Child can identify correctly 3-4 words	B	1	1
		Level C: Child can identify correctly 5-6 words	A		
7	6	**Phonemic Awareness**			
		NR: No Response	E	0	0
		Level A: Child can identify beginning sounds of 2 or less objects	C+D	0	0
		Level B: Child can identify beginning sounds of 3 objects	B	1	1
		Level C: Child can identify beginning sounds of 4 objects	A		
8	7	**Dictation**			
		NR: No Response	D	0	0
		Level A: Child can write 1-2 words, but with few spelling errors	C	0	0
		Level B: Child can write 3-4 words, but with few spelling errors	B	1	1
		Level C: Child can write 5-6 words with no spelling errors	A		
9	8	**Reading Comprehension**			
9.3	8.3	Question 1			
		NR: No Response or answers all questions incorrectly	D	0	0
		Level A: Answers 1 question correctly	C	0	0
		Level B: Answers 2-3 questions correctly	B	1	1
		Level C: Answers 4-5 questions correctly	A		
9.2.1	8.2.1	**Expression**			
		No response	D	0	0
		Level A: Very little expression and reads each letter and *maatra* individually	C	0	0
		Level B: Sometimes expressive and some hesitations	B	1	1
		Level C: Very expressive and fluent reading	A		
9.2.2	8.2.2	**Punctuation**			
		No response	D	0	0
		Level A: Reads word for word. Does not use any punctuation	C	0	0
		Level B:	B		
		Level C: Demonstrates the use of punctuation while reading	A	1	1
		Level C: 80-100% accurate	A		
	9	**Independent Writing**			
		NR: No Response	D	NA	0
		Level A: Child writes 1 sentence, but with few spelling errors	C	NA	0

		Level B: Child writes 2 sentences, but with few spelling errors	B	NA	
		Level C: Child writes 2 sentences with no spelling errors	A	NA	1
		Maximum achievable Score		10	10

Table 105: Scores as per competency

8.3.1   Competency matrix of grade I

Competencies	Indicator	Question No.	Year	UP				Odisha				Overall			
				High	Medium	Low	Very Low	High	Medium	Low	Very Low	High	Medium	Low	Very Low
	Number of children Grade I		2018	TOTAL= 398				TOTAL= 133				TOTAL= 531			
			2017	TOTAL= 407				TOTAL= 128				TOTAL= 535			
			2016	TOTAL= 423				TOTAL= 154				TOTAL= 577			
			2015	TOTAL= 405				TOTAL= 138				TOTAL= 543			
Reading context	Descriptive Language	2	2018	90	8	1	1	95	3	1	1	93	5	1	1
		2	2017	90	9	1	1	87	13	0	0	88	11	0	0
		2	2016	47	29	10	14	25	20	7	48	36	25	9	31
		2	2015	8	17	10	65	7	14	13	67	8	16	12	66
	Picture recognition/Word Bank	4	2018	97	3	0	0	100	0	0	0	99	1	0	0
		4	2017	97	3	0	0	98	2	0	0	97	3	0	0
		4	2016	95	4	0	2	96	5	0	0	96	5	0	1
		4	2015	81	14	2	3	85	15	0	0	83	15	1	2
Phonemic	Sound Identification	7	2018	54	18	9	19	73	5	6	16	64	12	7	17
		7	2017	66	9	7	18	63	16	5	17	64	12	6	17
		7.1	2016	43	1	5	51	54	1	2	44	49	1	4	48
		7.1	2015	12	1	2	85	44	2	3	51	28	2	3	68
Phonic	Alphabet recognition	5	2018	51	12	5	33	80	3	1	16	65	7	3	24
		5	2017	55	10	7	28	70	10	2	17	63	10	4	23
		5	2016	31	14	17	38	69	12	9	10	50	13	13	24
		5	2015	20	7	10	62	71	12	10	7	46	10	10	35
	Vocabulary (Word Identification)	6	2018	10	9	32	49	66	8	7	19	38	9	20	34
		6	2017	15	10	32	43	48	17	14	21	31	14	23	32
		6	2016	15	6	19	61	52	11	8	29	34	9	14	45
		6	2015	8	3	10	78	51	12	13	23	30	8	12	51
	Dictation	8	2018	9	10	18	62	31	30	12	27	20	20	15	45
		8	2017	13	8	25	55	23	29	9	39	18	19	17	47

		Code	Year	UP				Odisha				Overall			
		8	2016	9	9	12	70	27	22	14	36	18	16	13	53
		8	2015	3	3	9	84	20	22	22	37	12	13	16	61
Comprehension	Listening comprehension	3	**2018**	80	15	3	2	63	30	6	1	72	23	4	1
		3	2017	76	20	3	1	57	32	6	5	66	26	4	3
		3.1-3.5	2016	39	36	2	23	14	49	3	34	26	42	3	29
		3.1-3.5	2015	5	36	2	58	12	40	2	45	8	38	2	52
	Reading Comprehension	9.3	**2018**	4	4	2	90	14	29	9	47	9	17	6	69
		9.3	2017	6	7	2	85	16	20	2	63	11	13	2	74
		9.3.1-9.3.5	2016	4	2	0	94	6	9	10	75	5	6	5	85
		9.3.1-9.3.5	2015	1	1	0	98	4	5	8	83	3	3	4	91
Reading fluency	Tone and gesture	9.2.1	**2018**	1	5	2	93	4	15	7	74	2	10	4	84
		9.2.1	2017	2	4	8	86	5	8	23	65	3	6	15	76
		9.2.1	2016	1	1	0	98	1	8	4	87	1	5	2	93
		9.2.1	2015	1	2	1	96	3	1	6	90	2	2	4	93
	Punctuation	9.2.2	**2018**	1	4	3	92	2	16	5	77	2	10	4	85
		9.2.2	2017	2	4	5	89	5	9	20	66	3	6	13	78
		9.2.2	2016	1	3	2	95	3	6	13	78	2	5	8	87
		9.2.2	2015	1	0	3	96	9	5	8	78	5	3	6	87

Table 106: Competency Matrix of Grade I

Students who read the excerpt in grade I (in %)

	UP	Odisha	Overall
Endline (2018)	8	26	12
2017	18	47	25
2016	10	33	16
Baseline (2015)	8	27	13

Table 107: Percentage of students able to read the passage in Grade I

	Uttar Pradesh (in wpm)		Odisha (in wpm)		Average (in wpm)	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
Reading speed (wpm)	29	14	28	26	29	20

Reading fluency (% of students)	2	0	7	4	5	2
Reading fluently with comprehension (% of students)	1	0	7	2	4	1

Table 108: Comparative table of reading speed, fluency and fluency with comprehension in Grade I

8.3.2 Competency matrix of grade II

Competencies	Indicator	Question No.	Year	UP				Odisha				Overall			
				High	Medium	Low	Very Low	High	Medium	Low	Very Low	High	Medium	Low	Very Low
	Number of children Grade II		**2018**	TOTAL= 399				TOTAL= 133				TOTAL= 532			
			2017	TOTAL= 403				TOTAL= 136				TOTAL= 540			
			2016	TOTAL= 428				TOTAL= 154				TOTAL= 582			
			2015	TOTAL= 384				TOTAL= 138				TOTAL= 522			
Reading context	Picture recognition/Word Bank	3	**2018**	87	12	1	0	98	1	1	1	92	7	1	0
		3	2017	83	16		0	99	1	0	0	91	9	0	0
		3	2016	88	9	1	1	100	0	0	0	94	5	1	1
		3	2015	65	30	4	1	97	1	0	2	81	15	2	2
Phonemic awareness	Sound Identification	6	**2018**	70	17	4	9	89	5	1	5	80	11	3	7
		6	2017	81	4	2	12	89	4	1	5	85	4	2	9
		6.1	2016	53	3	7	38	86	1	1	12	70	2	4	25
		6.1	2015	22	2	1	75	59	4	3	34	41	3	2	55
Phonic awareness	Alphabet recognition	4	**2018**	64	16	4	16	83	12	2	3	74	14	3	10
		4	2017	66	14	5	15	86	8	3	3	76	11	4	9
		4	2016	42	22	17	20	81	7	3	9	62	15	10	15
		4	2015	42	9	8	41	82	11	4	4	62	10	6	22
	Vocabulary (Word Identification)	5	**2018**	18	10	33	40	66	5	19	10	42	8	26	25
		5	2017	26	13	24	37	66	10	10	13	46	12	17	25
		5	2016	16	8	19	57	62	8	7	22	39	8	13	40
		5	2015	14	5	13	67	57	14	12	17	35	10	13	42
	Dictation	7	**2018**	16	12	17	55	27	18	20	35	21	15	18	45
		7	2017	24	13	16	46	24	26	15	35	24	20	16	41
		7	2016	9	8	9	74	11	23	26	40	10	16	18	57
		7	2015	8	4	8	81	14	26	20	39	11	15	14	60
Comprehension	Listening comprehension	2	**2018**	79	19	2	0	53	35	8	5	66	27	5	3
		2	2017	75	21	3	1	56	36	6	2	66	28	4	2
		2.1-2.5	2016	40	35	2	22	14	33	4	49	27	34	3	36
		2.1-2.5	2015	8	37	3	51	3	38	1	58	6	37	2	55

Reading Comprehension		8.3	**2018**	15	10	2	73	22	19	6	53	18	15	4	63
		8.3	2017	18	14	7	61	32	22	6	40	25	18	6	51
		8.3.1-8.3.5	2016	8	4	1	86	8	16	14	61	8	10	8	74
		8.3.1-8.3.5	2015	3	6	0	91	11	11	10	67	7	9	5	79
Reading fluency	Tone and gesture	8.2.1	**2018**	5	10	9	76	11	17	14	57	8	14	11	67
		8.2.1	2017	5	16	17	61	7	24	24	46	6	20	21	53
		8.2.1	2016	7	5	4	84	3	9	16	73	5	7	10	79
		8.2.1	2015	3	6	3	88	1	7	14	79	2	7	9	84
	Punctuation	8.2.2	**2018**	4	13	5	78	12	14	14	59	8	14	10	69
		8.2.2	2017	4	15	17	65	11	24	21	45	8	19	19	55
		8.2.2	2016	4	6	4	86	7	14	24	55	6	10	14	71
		8.2.2	2015	3	4	5	88	12	12	14	62	8	8	10	75
Independent Writing		9	**2018**	11	10	5	74	17	11	8	64	14	11	6	69
		9	2017	14	8	5	72	23	12	17	49	18	10	11	60
		9	2016	6	3	2	89	6	14	5	74	6	9	4	82
		9	2015	2	7	2	89	2	20	1	76	2	14	2	83

Table 109: Competency Matrix of Grade II

Students who read the excerpt (in %)

	UP	Odisha	Overall
Endline (2018)	26	46	31
2017	45	67	51
2016	21	51	29
Baseline (2015)	16	52	26

Table 110: Percentage of students able to read the passage in Grade II

	Uttar Pradesh (in wpm)		Odisha (in wpm)		Average (in wpm)	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
Reading speed (wpm)	44	29	37	34	41	32
Reading fluency (% of students)	12	4	17	17	15	11
Reading fluently with comprehension (% of students)	12	4	17	13	15	9

Table 111: Comparative table of reading speed, fluency and fluency with comprehension in Grade II

8.3.3 Competency matrix of grade III

Competencies	Indicator	Question No.	Year	UP				Odisha				Overall			
				High	Medium	Low	Very Low	High	Medium	Low	Very Low	High	Medium	Low	Very Low
	Number of children Grade III		2018	TOTAL= 399				TOTAL= 133				TOTAL= 532			
			2017	TOTAL= 406				TOTAL= 135				TOTAL= 541			
			2016	TOTAL= 426				TOTAL= 154				TOTAL= 580			
			2015	TOTAL= 396				TOTAL= 139				TOTAL= 535			
Reading context	Picture recognition/Word Bank	3	2018	68	25	6	1	55	32	10	4	62	28	8	2
		3	2017	89	8	3	0	83	15	1	1	86	11	2	1
		3	2016	90	6	2	2	57	27	8	8	74	17	5	5
		3	2015	72	12	7	9	60	21	6	14	66	17	7	12
Phonemic awareness	Sound Identification	6	2018	71	18	5	6	83	8	5	5	77	13	5	5
		6	2017	78	13	4	4	81	11	2	6	80	12	3	5
		6.1	2016	69	2	7	22	92	0	0	8	81	1	4	15
		6.1	2015	31	1	4	64	84	4	0	12	58	3	2	38
Phonic awareness	Alphabet recognition	4	2018	77	13	3	7	89	6	1	4	83	9	2	6
		4	2017	76	10	3	11	83	11	1	5	80	10	2	8
		4	2016	62	13	11	14	88	8	3	0	75	11	7	7
		4	2015	48	12	6	33	96	2	1	0	72	7	4	17
	Vocabulary (Word Identification)	5	2018	27	15	32	26	73	8	19	0	50	12	25	13
		5	2017	36	14	25	25	47	16	20	17	42	15	23	21
		5	2016	32	12	18	38	63	10	11	16	48	11	15	27
		5	2015	19	8	17	56	68	17	11	6	44	13	14	31
	Dictation	7	2018	19	19	27	36	30	16	24	30	24	17	25	33
		7	2017	19	23	24	34	11	19	20	50	15	21	22	42
		7	2016	19	16	16	49	8	18	29	46	14	17	23	48
		7	2015	8	8	13	71	11	21	30	38	9	14	22	55
Comprehension	Listening comprehension	2	2018	72	22	3	4	73	26	2	0	72	24	2	2
		2	2017	64	25	7	4	67	29	2	1	65	27	5	3
		2.1-2.5	2016	46	24	4	26	34	41	3	22	40	33	3	24
		2.1-2.5	2015	4	34	2	61	34	34	2	29	19	34	2	45
	Reading Comprehension	8.3	2018	29	12	4	56	35	29	5	31	32	20	5	43

		8.3	2017	32	16	7	45	30	12	5	53	31	14	6	49
		8.3.1-8.3.5	2016	19	8	2	70	22	19	8	52	21	13	5	61
		8.3.1-8.3.5	2015	4	11	0	85	20	21	15	44	12	16	8	64
Reading fluency	Tone and gesture	8.2.1	**2018**	8	17	12	63	20	31	17	32	14	24	15	48
		8.2.1	2017	16	19	15	50	10	24	19	47	13	21	17	48
		8.2.1	2016	9	13	7	71	10	21	17	52	10	17	12	62
		8.2.1	2015	5	14	7	73	11	9	19	62	8	12	13	68
	Punctuation	8.2.2	**2018**	4	19	12	65	18	26	15	41	11	22	14	53
		8.2.2	2017	12	18	16	53	11	26	15	48	12	22	15	51
		8.2.2	2016	6	13	11	71	22	14	18	47	14	14	15	59
		8.2.2	2015	5	11	9	75	9	15	24	52	7	13	17	64
Independent Writing		9	**2018**	17	16	6	60	34	16	3	47	26	16	5	54
		9	2017	27	11	4	57	22	19	4	54	25	15	4	56
		9	2016	9	8	4	79	3	16	12	69	6	12	8	74
		9	2015	2	7	5	85	3	19	12	66	3	13	9	76

Table 112: Competency Matrix of Grade III

Students who read the excerpt in grade III (in %)

	UP	**Odisha**	**Overall**
Endline (2018)	41	68	48
2017	60	67	61
2016	36	61	43
Baseline (2015)	29	75	41

Table 113: Percentage of students able to read the passage in Grade III

	Uttar Pradesh (in wpm)		Odisha (in wpm)		Average (in wpm)	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
Reading speed (wpm)	53	34	49	50	51	42
Reading fluency (% of students)	26	12	37	44	32	28
Reading fluently with comprehension (% of students)	25	11	35	34	30	23

Table 114: Comparative table of reading speed, fluency and fluency with comprehension in Grade III

8.3.4 Competency matrix of grade IV

Competencies	Indicator	Question No.	Year	UP				Odisha				Overall			
				High	Medium	Low	Very Low	High	Medium	Low	Very Low	High	Medium	Low	Very Low
	Number of children Grade IV		2018	TOTAL= 399				TOTAL= 133				TOTAL= 532			
			2017	TOTAL= 413				TOTAL= 144				TOTAL= 557			
			2016	TOTAL= 425				TOTAL= 154				TOTAL= 579			
			2015	TOTAL= 369				TOTAL= 138				TOTAL= 507			
Reading context	Picture recognition/Word Bank	3	2018	75	19	5	1	68	23	8	2	71	21	7	1
		3	2017	94	5	1	1	90	8	2	1	92	6	2	1
		3	2016	91	3	2	5	62	16	14	7	77	10	8	6
		3	2015	80	11	6	3	76	14	7	4	78	13	7	4
Phonemic awareness	Sound Identification	6	2018	79	16	3	3	90	4	4	2	85	10	3	3
		6	2017	87	7	2	4	90	8	1	1	89	7	2	3
		6.1	2016	67	5	5	24	91	0	2	7	79	3	4	16
		6.1	2015	38	2	4	56	75	1	8	17	57	2	6	37
Phonic awareness	Alphabet recognition	4	2018	84	9	1	6	89	5	3	3	87	7	2	5
		4	2017	81	9	2	8	88	9	1	2	85	9	1	5
		4	2016	72	14	5	9	94	3	1	1	83	9	3	5
		4	2015	69	10	4	18	94	4	0	2	82	7	2	10
	Vocabulary (Word Identification)	5	2018	38	17	23	22	77	6	10	7	58	11	16	14
		5	2017	34	21	20	25	63	17	8	11	49	19	14	18
		5	2016	37	10	15	37	79	9	6	7	58	10	11	22
		5	2015	30	8	16	46	76	12	6	6	53	10	11	26
	Dictation	7	2018	32	18	20	30	21	27	34	18	27	23	27	24
		7	2017	29	19	18	34	15	28	33	24	22	24	25	29
		7	2016	26	14	12	48	10	34	40	16	18	24	26	32
		7	2015	17	11	11	61	17	36	31	17	17	24	21	39
Comprehension	Listening comprehension	2	2018	68	25	4	3	47	44	8	1	58	34	6	2
		2	2017	44	40	12	4	80	17	3	1	62	28	7	2
		2.1-2.5	2016	36	24	7	34	44	26	5	26	40	25	6	30
		2.1-2.5	2015	4	28	2	67	33	33	4	30	18	30	3	49
	Reading Comprehension	8.3	2018	48	12	2	39	18	32	20	31	33	22	11	35
		8.3	2017	48	10	2	40	36	29	8	27	42	20	5	33
		8.3.1-8.3.5	2016	26	10	3	61	33	15	17	36	29	12	10	49

		8.3.1-8.3.5	2015	5	21	1	72	26	20	23	32	16	21	12	52
Reading fluency	Tone and gesture	8.2.1	**2018**	15	23	15	47	20	40	15	25	17	31	15	36
		8.2.1	2017	18	28	15	40	18	29	22	31	18	28	18	35
		8.2.1	2016	16	15	8	62	14	17	19	51	15	16	14	57
		8.2.1	2015	9	16	8	67	10	14	20	55	10	15	14	61
	Punctuation	8.2.2	**2018**	11	25	16	48	20	38	18	22	15	31	17	35
		8.2.2	2017	13	22	18	48	20	29	16	35	16	25	17	41
		8.2.2	2016	13	12	12	64	31	7	18	44	22	10	15	54
		8.2.2	2015	8	14	11	67	17	19	24	41	12	16	17	54
Independent Writing		9	**2018**	22	24	11	44	31	23	9	38	26	23	10	41
		9	2017	24	22	8	46	31	23	15	31	27	22	12	39
		9	2016	14	11	6	70	13	42	2	44	14	27	4	57
		9	2015	9	7	6	78	6	38	15	41	8	23	11	60

Table 115: Competency Matrix of Grade IV

Students who read the excerpt in grade IV (in %)

	UP	Odisha	Overall
Endline (2018)	57	77	62
2017	67	81	70
2016	47	76	54
Baseline (2015)	43	87	55

Table 116: Percentage of students able to read the passage in Grade IV

	Uttar Pradesh (in wpm)		Odisha (in wpm)		Average (in wpm)	
	Endline	**Baseline**	**Endline**	**Baseline**	**Endline**	**Baseline**
Reading speed (wpm)	58	39	59	62	59	51
Reading fluency (% of students)	38	17	59	68	49	43
Reading fluently with comprehension (% of students)	37	17	41	53	39	35

Table 117: Comparative table of reading speed, fluency and fluency with comprehension in Grade IV
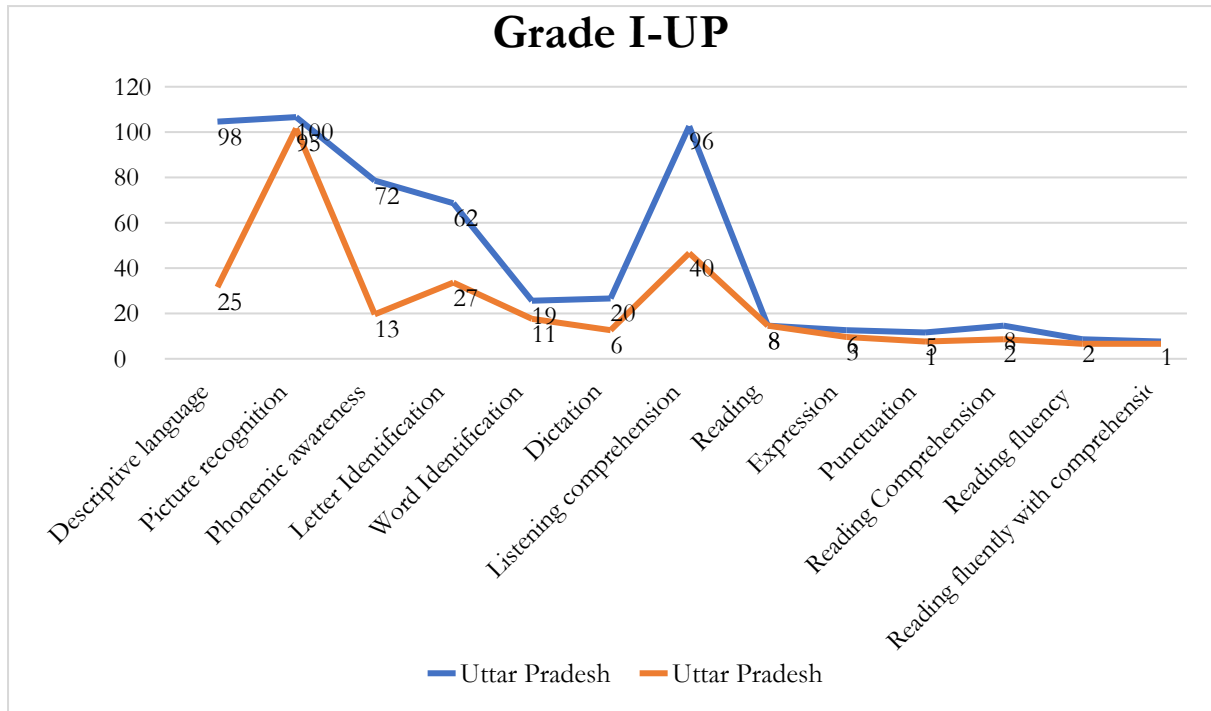
Grade I-UP

Figure 1: Comparative indicators graph, Grade I, UP
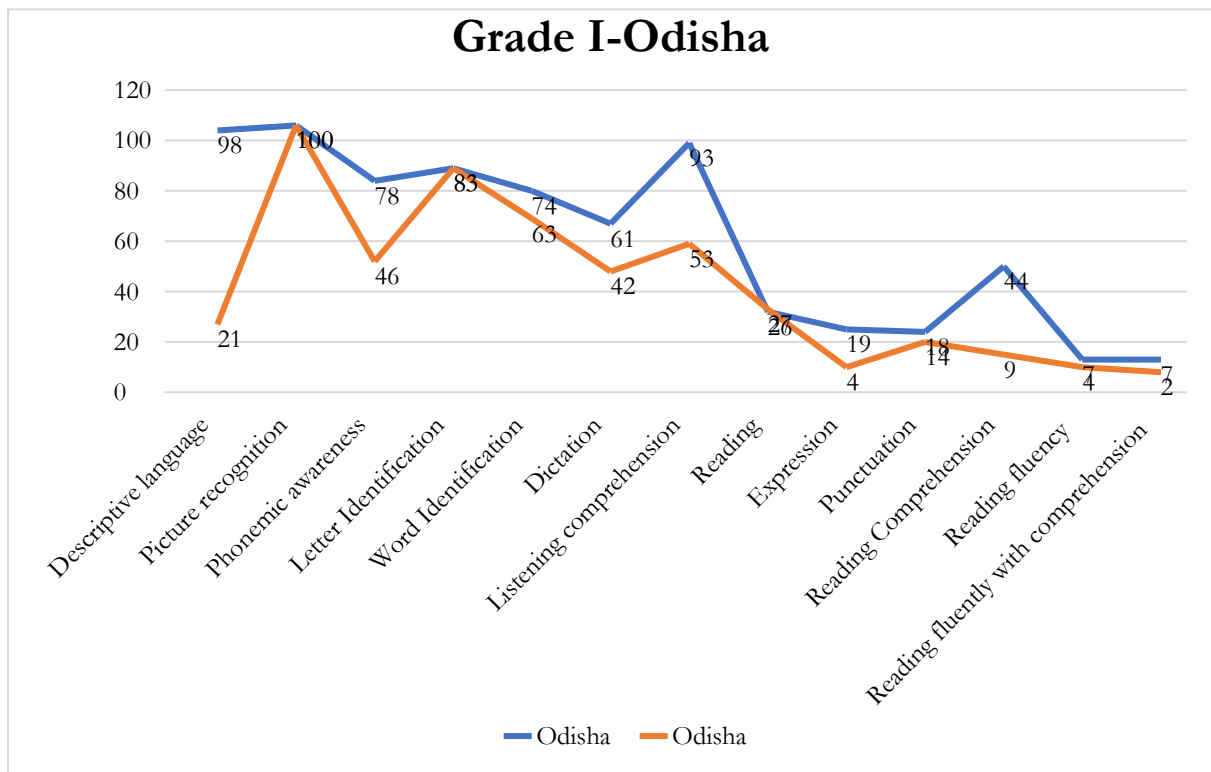
Grade I-Odisha

Figure 2: Comparative indicators graph, Grade I, Odisha
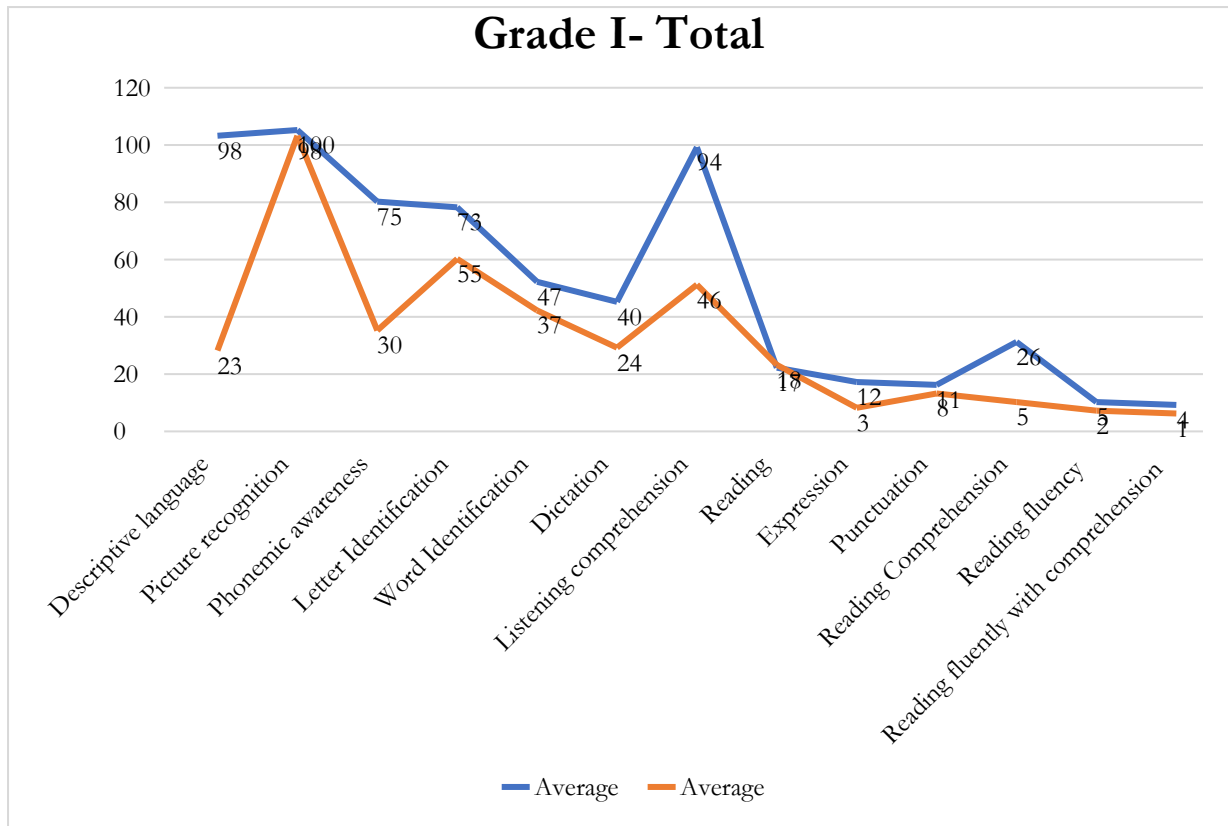
Figure 3: Comparative indicators graph, Grade I, Total
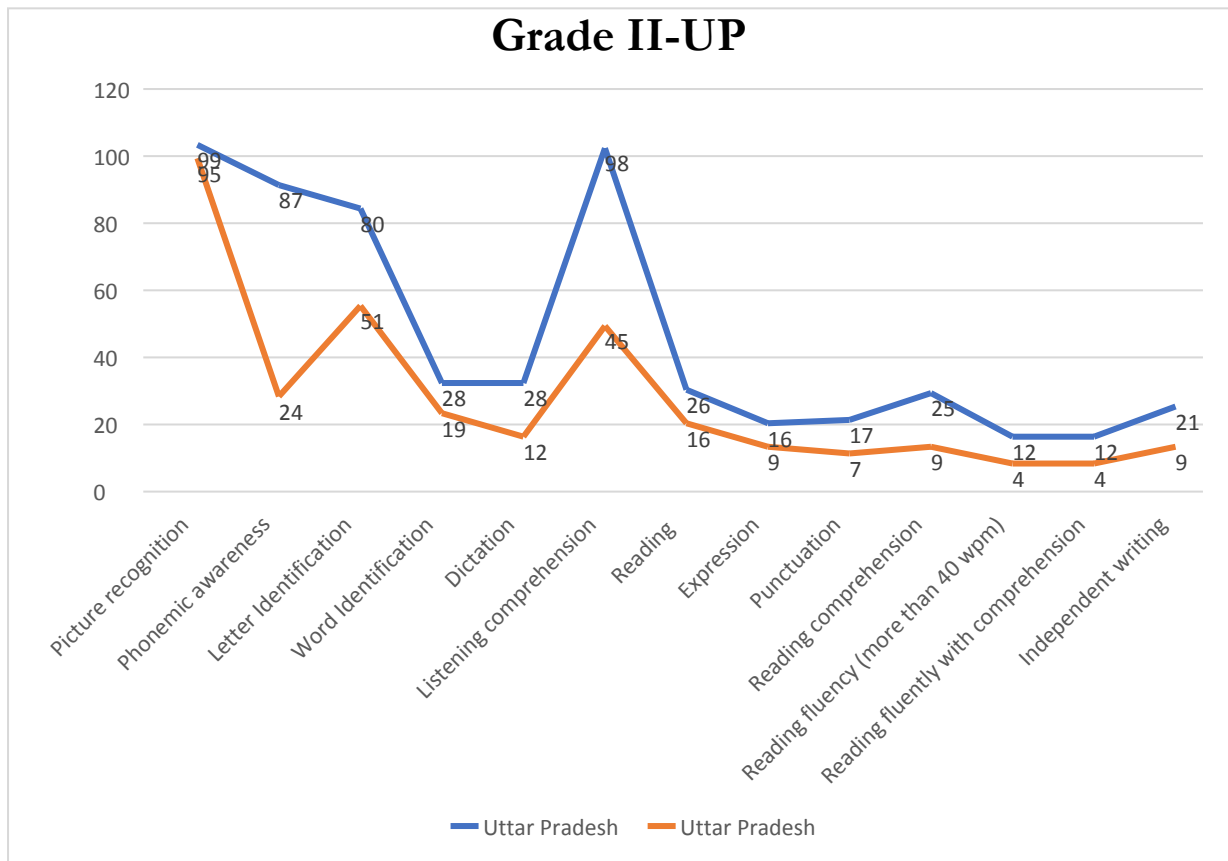

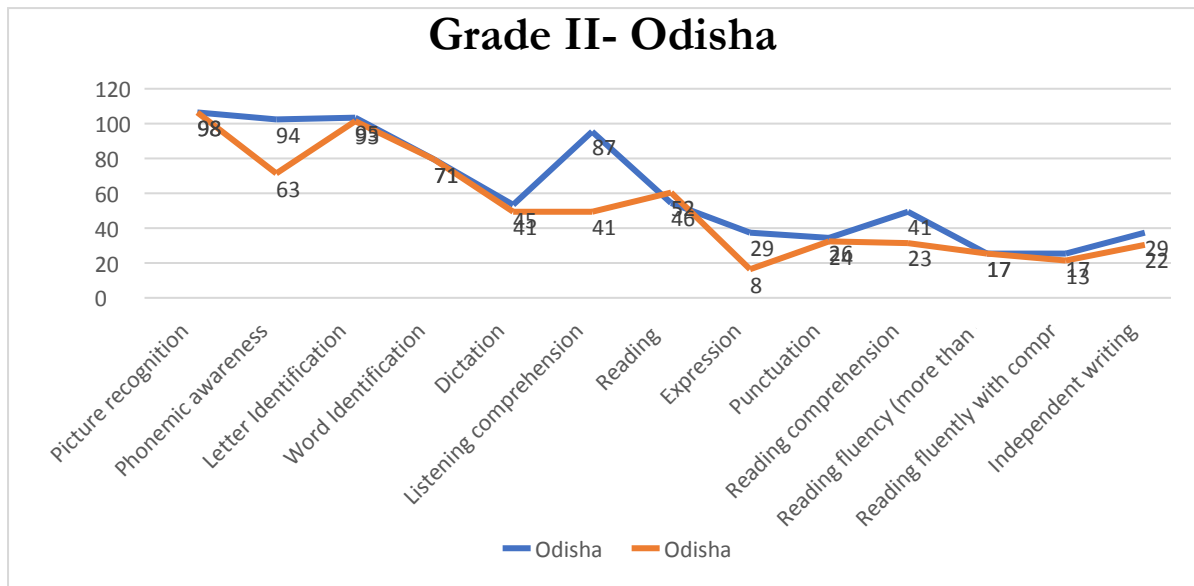*Figure 4: Comparative indicators graph, Grade II, UP*

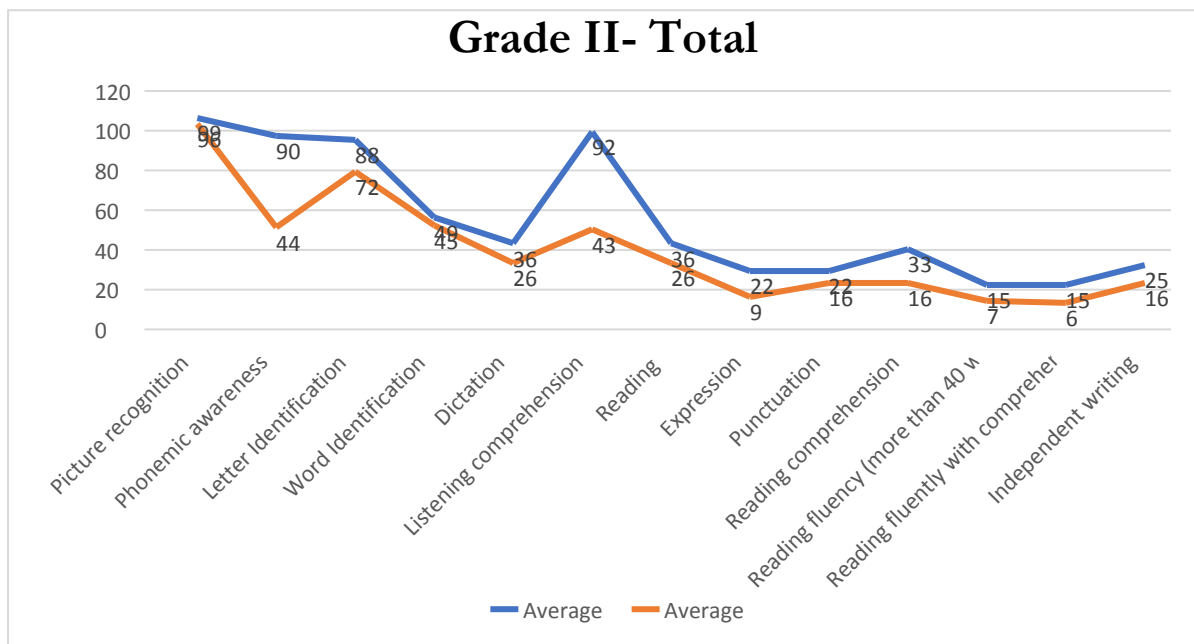*Figure 5: Comparative indicators graph, Grade II, Odisha*
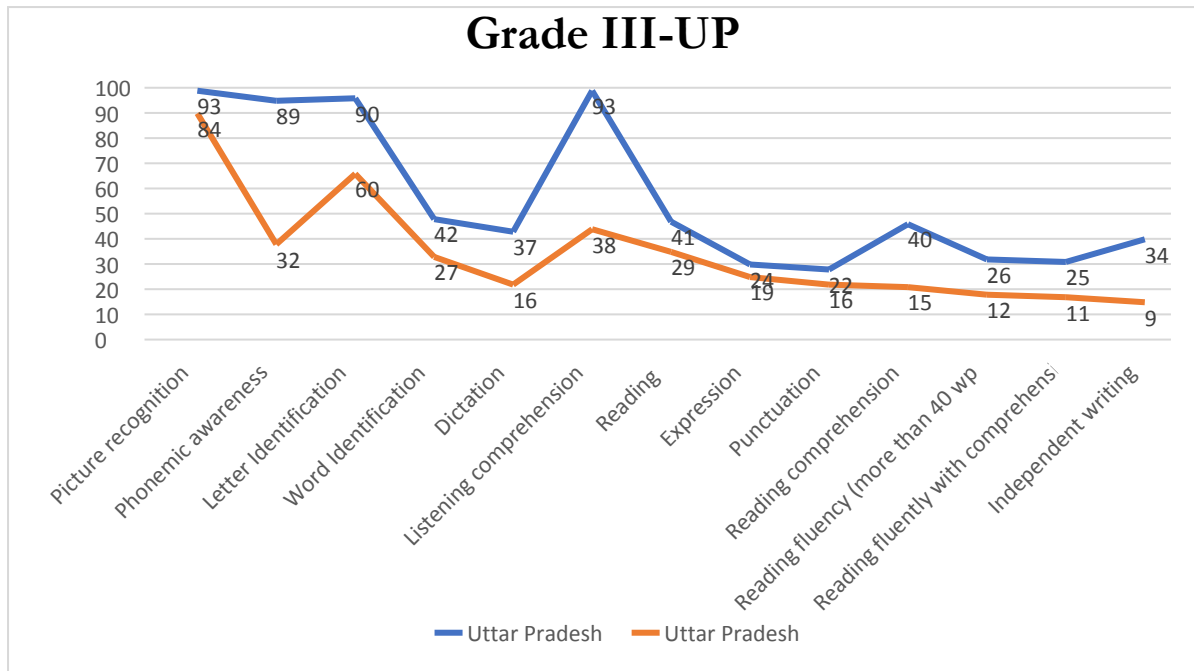

Figure 6: Comparative indicators graph, Grade II, Total

Grade III-UP

Figure 7: Comparative indicators graph, Grade III, UP
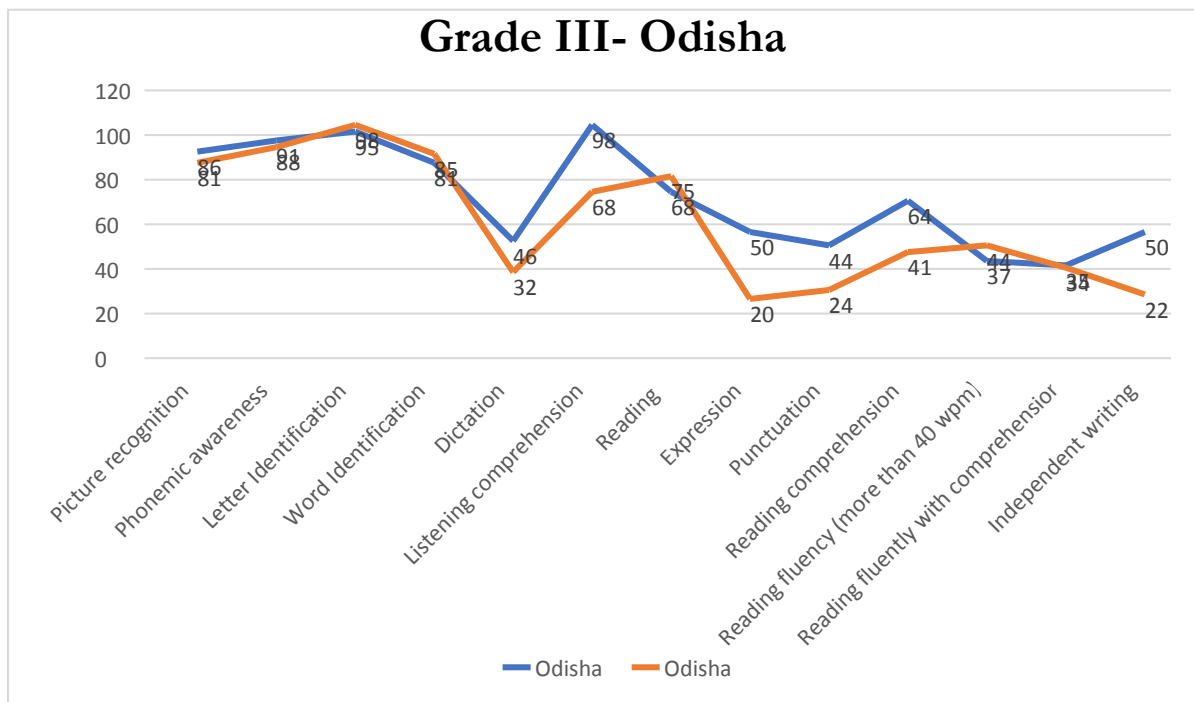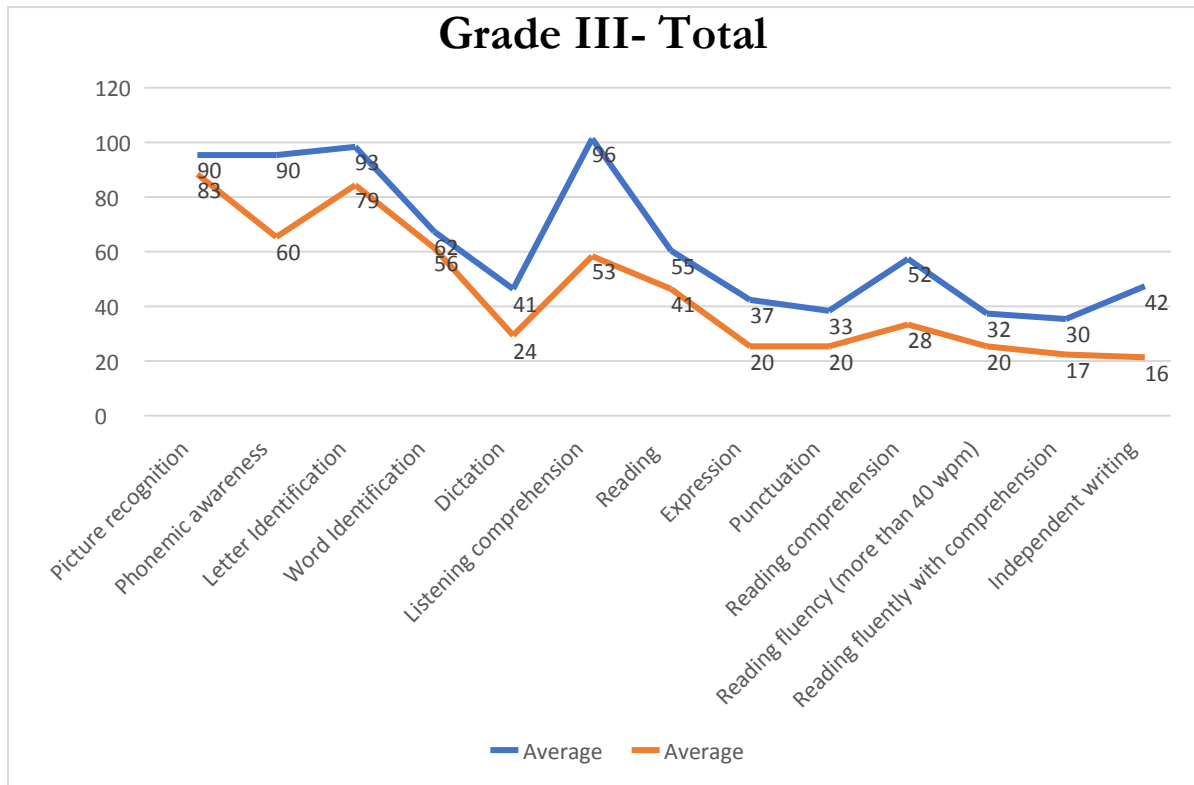
Grade III- Odisha

Figure 8: Comparative indicators graph, Grade III, Odisha

Figure 9: Comparative indicators graph, Grade III, Total
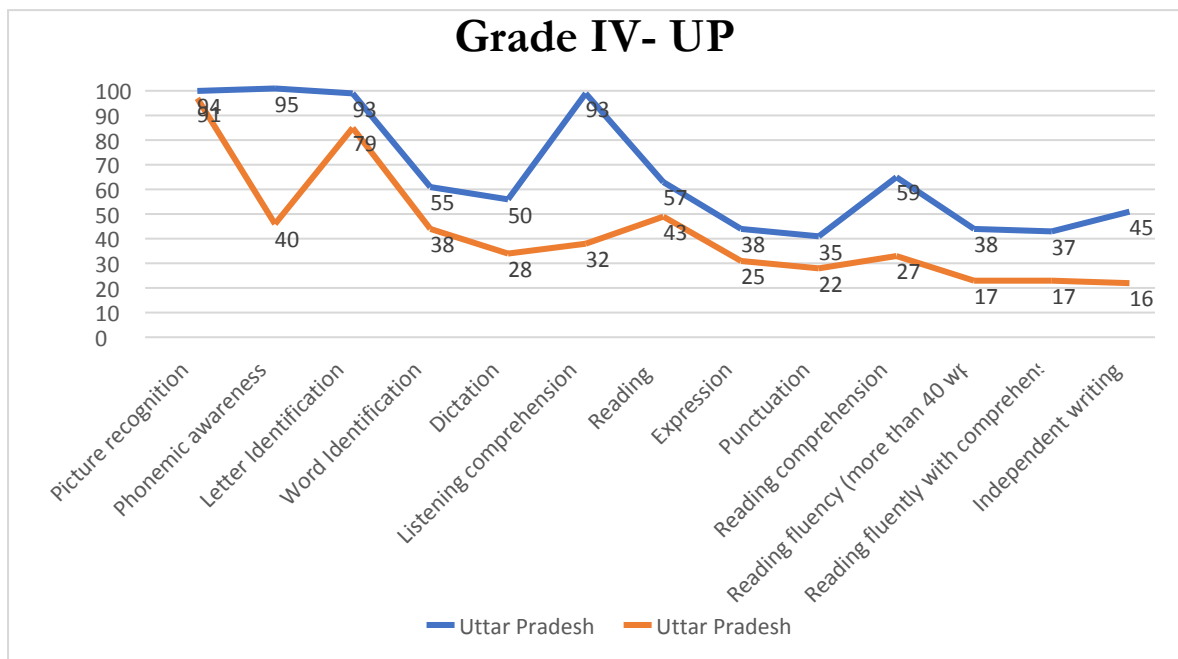

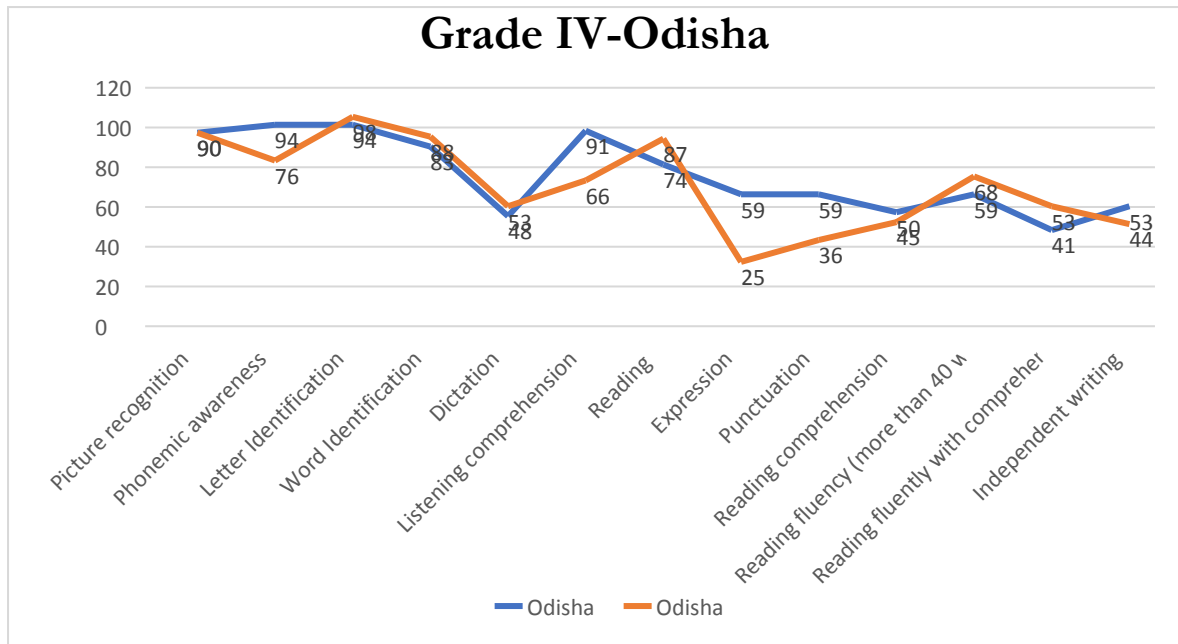*Figure 10: Comparative indicators graph, Grade IV, UP*

Grade IV-Odisha

Values shown: Picture recognition 90 (blue) / 97 (orange); Phonemic awareness 94 / 76; Letter Identification 94 / 94; Word Identification 88 / 85; Dictation 53 / 48; Listening comprehension 91 / 66; Reading 74 / 87; Expression 59 / 25; Punctuation 59 / 36; Reading comprehension 50 / 45; Reading fluency (more than 40 w 59 / 68; Reading fluently with compreher 41 / 53; Independent writing 53 / 44
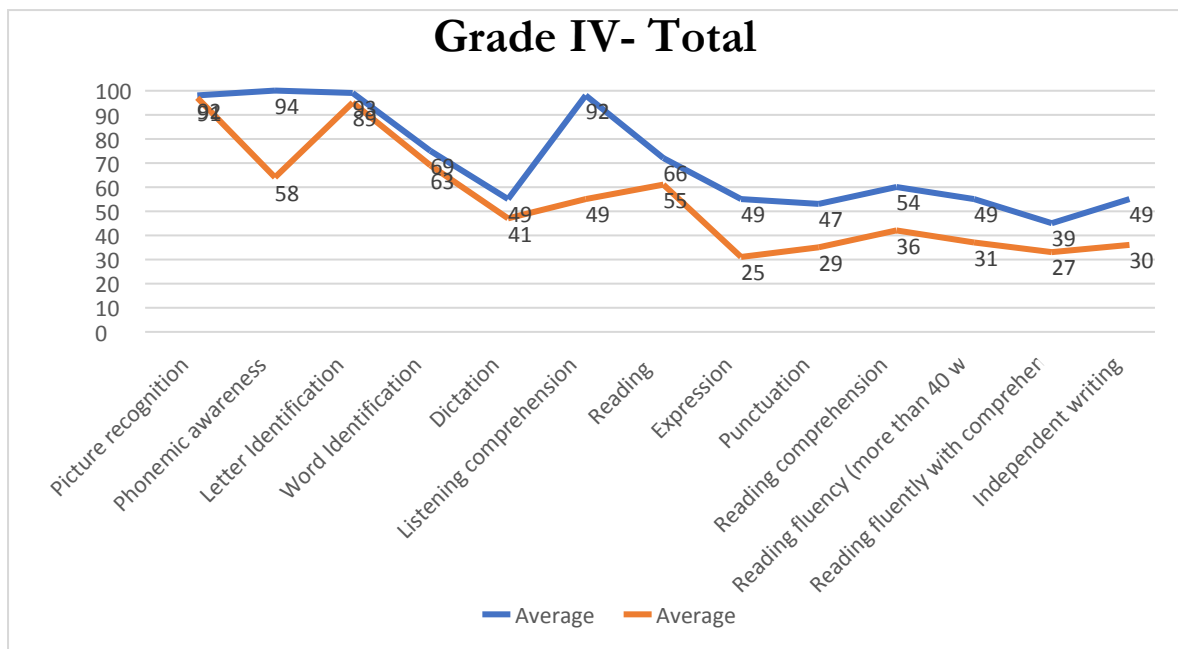
Legend: Odisha, Odisha

Figure 11: Comparative indicators graph, Grade IV , Odisha

Grade IV- Total

Values shown: Picture recognition 92 (both); Phonemic awareness 94 / 58; Letter Identification 93 / 89; Word Identification 69 / 63; Dictation 49 / 41; Listening comprehension 92 / 49; Reading 55 / 66; Expression 49 / 25; Punctuation 47 / 29; Reading comprehension 54 / 36; Reading fluency (more than 40 w 49 / 31; Reading fluently with compreher 39 / 27; Independent writing 49 / 30

Legend: Average, Average